288849

Class Journal. No.

EXCHANGE

LIBRARY OF THE
COLLEGE OF PHYSICIANS
OF PHILADELPHIA

Digitized by the Internet Archive
in 2016

https://archive.org/details/westvirginiamedi7219west

the West Virginia Medical Journal

FFICIAL ORGAN OF
WEST VIRGINIA STATE
DICAL ASSOCIATION

. 72 No. 1

9th Mid-Winter Clinical Conference
January 30 - February 1, 1976

LIBRARY OF THE
COLLEGE OF PHYSICIANS
OF PHILADELPHIA
JAN 19 1976
MDS

BECOTIN®
Vitamin B Complex

BECOTIN® with VITAMIN C
Vitamin B Complex with Vitamin C

BECOTIN®-T
Vitamin B Complex with Vitamin C, Therapeutic

MI-CEBRIN®
Vitamins-Minerals

MI-CEBRIN T®
Vitamin-Minerals Therapeutic

AND A WIDE VARIETY OF OTHER PHARMACEUTICALS

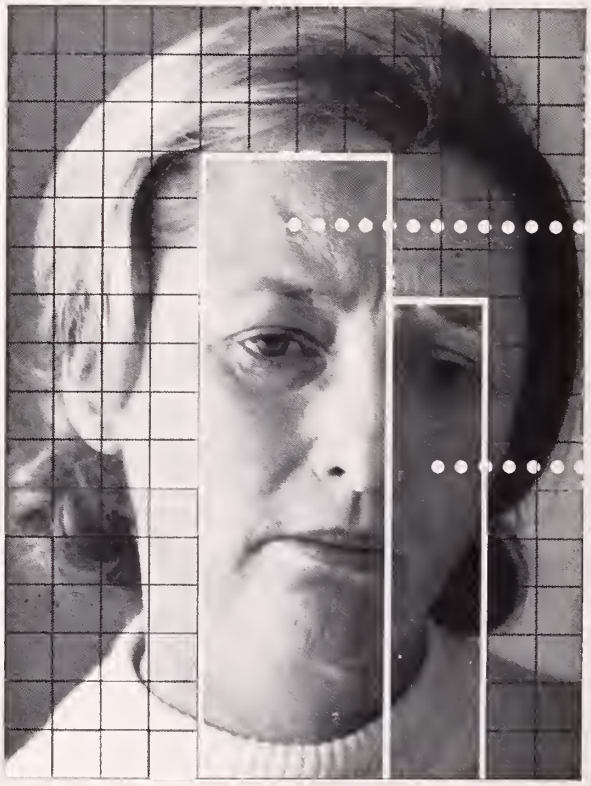
DISTA

DISTA PRODUCTS COMPANY
Division of Eli Lilly and Company
Indianapolis, Indiana 46206

400944

JANUARY 1976

Both ofte



Predominant psychoneurotic anxiety

Associated depressive symptoms

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; symptomatic relief of acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology, spasticity caused by upper motor neuron disorders, athetosis, stiff-man syndrome, convulsive disorders (not for sole therapy).

Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in f and/ or severity of grand mal seiz require increased dosage of stan convulsant medication; abrupt wi may be associated with temporar crease in frequency and/ or sever seizures. Advise against simultan gestion of alcohol and other CNS sants. Withdrawal symptoms (sir those with barbiturates and alcoh occurred following abrupt discon (convulsions, tremor, abdominal cle cramps, vomiting and sweatin addiction-prone indlviduals unde

JANUARY
1976

Vol. 72 No. 1

The WEST VIRGINIA Medical Journal

Official Organ of the West Virginia State Medical Association

Box 1031 Charleston, W. Va. 25324

EDITOR
George F. Evans, M. D. (1981)
Clarksburg

MANAGING EDITOR AND BUSINESS MANAGER
Mr. Charles R. Lewis
Charleston

EXECUTIVE ASSISTANT
Mr. Custer B. Holliday
Charleston

ASSOCIATE EDITORS

E. J. Van Liere, M. D. (1976)
Morgantown

Stephen D. Ward, M. D. (1977)
Wheeling

John M. Hartman, M. D. (1978)
Charleston

Vernon E. Duckwall, M.D.(1979)
Elkins

Thomas J. Holbrook, M.D.(1980)
Huntington

Joe N. Jarrett, M. D. (1982)
Oak Hill

Published monthly by the West Virginia State Medical Association under the direction of the Publication Committee. Original articles are accepted on condition that they are contributed solely to The Journal.

Entered as second-class matter January 1, 1926, at the post office at Charleston, West Virginia, under the act of March 3, 1879.

Subscription Rates: $10 a year in the U.S.A.; $15 in foreign countries; $2 per single copy. Advertising rates furnished on request. Address all communications to Business Manager, The West Virginia Medical Journal, Box 1031, Charleston, West Virginia 25324. Phone 346-0551.

Microfilm editions beginning with the 1972 volume are available from University Microfilms, Inc., 300 N. Zeeb Road, Ann Arbor, Michigan 48106.

Member 1976

CONTENTS

Scientific Articles

Syphilitic Aneurysms With Bone Erosion and Rupture—Roland J. Weisser, Jr., M. D.; and Robert J. Marshall, M. D. 1

Gallbladder Anomalies With A Report of A Double Gallbladder — Gopal M. Pardasani, M. D. 5

Non-Obstructive Bladder Dysfunction—Mark F. Roller, M. D.; Stanley J. Kandzari, M. D.; and D. Franklin Milam, M. D. 8

Scientific Department

Medical Grand Rounds From The West Virginia University Medical Center (Mycosis Fungoides)—Edited by Raymond B. Weiss, M. D. 11

The President's Page

For Whom Do You Care?—Carl B. Hall, M. D., President, American Academy of Family Physicians 16

Editorials

Death Defined in West Virginia 17

Significance of Unilateral Arcus Corneae Senilis 18

General News

Mid-Winter Conference Program Complete 19

Continuing Education Activities 21

AMA Adopts West Virginia Resolution 22

WVU 'Internal Medicine Day' 22

Early Report of Malpractice Claims Urged 23

Broaddus Hospital - Myers Clinic CME Survey 23

Nutrition Labeling of Food 23

Special Departments

WVU Medical Center News x

The Month in Washington xii

Obituaries xiv

County Societies xvii

Classified Section xxv

Index to Advertisers xxvi

288869

JUL 17 1979

respond to one

According to her major symptoms, she is a psychoneurotic patient with severe anxiety. But according to the description she gives of her feelings, part of the problem may sound like depression. This is because her problem, although primarily one of excessive anxiety, is often accompanied by depressive symptomatology. Valium (diazepam) can provide relief for both—as the excessive anxiety is relieved, the depressive symptoms associated with it are also often relieved.

There are other advantages in using Valium for the management of psychoneurotic anxiety with secondary depressive symptoms: the psychotherapeutic effect of Valium is pronounced and rapid. This means that improvement is usually apparent in the patient within a few days rather than in a week or two, although it may take longer in some patients. In addition, Valium (diazepam) is generally well tolerated; as with most CNS-acting agents, caution patients against hazardous occupations requiring complete mental alertness.

Also, because the psychoneurotic patient's symptoms are often intensified at bedtime, Valium can offer an additional benefit. An *h.s.* dose added to the *b.i.d.* or *t.i.d.* treatment regimen can relieve the excessive anxiety and associated depressive symptoms and thus encourage a more restful night's sleep.

Valium® (diazepam) IV

2-mg, 5-mg, 10-mg scored tablets

in psychoneurotic anxiety states with associated depressive symptoms

surveillance because of their predisposition to habituation and dependence. In pregnancy, lactation or women of childbearing age, weigh potential benefit against possible hazard.

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

ROCHE

Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

main purpose of drug information for the patient is to get his cooperation in following a drug regimen.

Preparation and distribution of patient drug information

We would hope to amass information from physicians, medical societies, the pharmaceutical industry and centers of medical learning. The ultimate responsibility for uniform labeling must, however, rest with the Food and Drug Administration. There is nothing wrong with this agency saying, "this information is generally agreed upon and therefore it should be used," as long as our process for getting the information is sound.

Distribution of the information is a problem. In great measure it would depend on the medication in question. For example, in the case of an injectable long-acting progesterone, we would think it mandatory to issue two separate leaflets—a short one for the patient to read before getting the first shot and a long one to take home in order to make a decision about continuing therapy. In this case, the information might be put directly on the package and not removable at all. But for a medication like an antihistamine this information might be issued separately, thus giving the physician the option of distribution. This could preserve the placebo use, etc.

It is in the distribution of patient information that the pharmacist may get involved. As professionals and members of the health-care team and as a most important source of drug information to patients, pharmacists should be responsible for keeping medical and drug records on patients. It is also logical that they should distribute drug information to them.

Realistic problems must be considered

We have to expect that the introduction of an information device will also create new problems. First, how can we communicate complex and sophisticated information to people of widely divergent socioeconomic and ethnic groups? Second, what will we say? And third, how can we counteract the negative attitude of many physicians toward any outside influence or input? Hopefully the medical profession will respond by anticipating the problems and helping to solve them. Assuming we can also solve the difficulty of communicating information to diverse groups throughout the United States, our remaining task will be the inclusion of appropriate material.

What information is appropriate?

In my opinion, technical, chemical and such types of material should not be included. And there is no point in the routine listing of side effects like nausea and vomiting which seem to apply to practically all drugs, unless it is common with the drug. However, serious side effects should be listed, as should information about a medication that is potentially risky for other reasons.

Other pertinent information might consist of drug interactions, the need for laboratory follow-up, and special storage requirements. What we want to include is information that will help increase patient compliance with the therapy.

Positive aspects of patient drug information

Labeling medication for the patient would accomplish a number of good things: the patient could be on the lookout for possible serious side effects; his compliance would increase through greater understanding; the physician would be a better source of information since he would be freer to use his time more effectively; other members of the health-care team would benefit through patient understanding and cooperation; and, finally, the physician-patient relationship would probably be enhanced by the greater understanding on the part of the patient of what the physician is doing for him.

Only the doctor can remove that fear by 20 or 30 minutes of conversation.

I'm not suggesting that we withhold any information from the patient because, first of all, it would be totally dishonest and secondly, it would defeat the very purpose of the insert. I do think that a patient on the birth control pill should know about the incidence of phlebothrombosis.

If you're going to tell a patient the incidence of serious adverse reactions, then you have to tell him that a concerned medical decision was made to use a particular medication in his situation after careful consideration of the incidence of complications or side effects.

Emotionally unstable patients pose a special problem

There are patients who, because of severe emotional problems, could not handle the information contained in a patient package insert. Yet if we are going to have a package insert at all, we just can't have two inserts. I think we might simply have to tell the families of these patients to remove the insert from the package.

Legal implications of the patient package insert

Just what effect would a patient package insert have on malpractice? We could try to avoid any legal implications by pointing out that the physician has selected a particular medication because, in his professional judgment, it is the treatment of choice. For instance, you can't tell everyone taking antihistamines not to work just because a few patients develop extreme drowsiness which can lead to accidents. And what about the very small incidence of aplastic anemia rarely associated with chloramphenicol? If, based on sensitivity studies and other criteria, we decide to employ this particular antibiotic, we do so in full knowledge of this serious potential side effect. It's not a simple problem.

How do we handle an insert for medication used for a placebo effect?

With rare exceptions, physicians no longer use medications for a placebo effect. This question does raise the issue of how a patient may react to receiving a medication without a package insert.

Preparation of the package insert

The development of the insert ought to be a joint operation between physicians, the pharmaceutical industry, the A.M.A. and the F.D.A.

I view the A.M.A.'s role as a coordinator or catalyst. It is the only organization through which the profession as a whole, irrespective of specialty, can speak. It has relatively instant access to all the medical expertise in this country. And it can bring that professional expertise together to ensure a better package insert. The A.M.A. can work in conjunction with the industry that has produced the product and which is ultimately going to supply the insert.

I don't think we should rely, or expect to rely, on legislative committees and their nonprofessional staffs to make these decisions when it is perfectly within the power of the two groups to resolve the issues in the very best American tradition—without the government forcing us to do it. I think the F.D.A. has to be involved, but I'd like them to become involved because they were asked to become involved.

Pharmaceutical Manufacturers Association
1155 Fifteenth Street, N.W.
Washington, D.C. 20005

P·M·A

WVU Medical Center
—News—

SHE's West Virginia University Hospital's consumer analyst, the patients' representative, the patients' advocate.

Although the first of the three titles is Virginia Nugent's official one, there are others (righter-of-wrongs—real or imaginary, efficiency expert, trouble shooter?) that might describe even better how she attempts to make patients' experiences at University Hospital as pleasant as possible.

Her goal is not new; it has been shared from the start by nurses, doctors, aides, orderlies, administrators, social workers, office personnel and others who work in the hospital. But, while their jobs also entail many other duties, Virginia Nugent's mission can be and is singularly devoted to spotting and eliminating what might cause difficulties for or complaints from patients.

Every day in her work, Mrs. Nugent stops, looks and listens with sympathy and concern. She is one of a relatively new breed of specialists.

More and more, many hospitals realize that their growth and increased specialization must be reinforced with the services of these patient representatives. Hundreds of them, mostly women, are at work in the United States, and their numbers are increasing every day.

Patient representatives fill a different role from that of hospital social workers, according to the May 1, 1974, issue of *Hospitals*, a publication of the American Hospital Association. The magazine describes them as charged with removing "institutional obstacles to providing high-quality health care" and explains that they ". . . have primary responsibility to explain the philosophy, policies, procedures, and services of the hospital to patients, their families, and visitors: to communicate patients' perceptions and experiences to administrative department heads and staff members; to identify specific problems and to suggest solutions; and to suggest alternatives to procedures."

When she came to work at the hospital last June, Virginia Nugent pondered how to approach her task of looking at every area of patient care and decided to "experience" the hospital as a patient would. Thus, she looked at parking, entrances, signs, how questions were answered, how help was extended, how long one waited and why. She even spent a night in the emergency room area.

• Compiled from moteriol furnished by Mrs. Mory Ellin Wylie, Director, Medicol Center News and Informotion Services, Morgontown, W. Vo.

Her next step was to interview informally 60 patients, asking them what they liked or didn't like about their rooms—was there too much noise? how about lighting? were needed items missing? No gripe was too small for her to listen to.

These soundings are resulting in ideas and plans aimed at further improving the patient's hospital environment.

How are Mrs. Nugent's efforts seen from inside? Audrey Windemuth, Associate Director of the hospital and Director of Nursing Services, says, "She has brought more keenly to the attention of all of us not only the problems of the patients but their environmental needs as well. We feel the hospitalization period for patients is enriched because of her presence."

Into her office on the first floor come not just complaints but verbal bouquets from outside, too. Excerpts from a recent letter to Virginia Nugent read: "Recently . . . I was a patient in the University Hospital when I had eye surgery. It seems appropriate to tell you that the professional care and custodial care I had was good beyond my highest expectations. The food was great, the atmosphere friendly and helpful . . . they certainly made me feel special. I tried to express my appreciation . . . but I also wanted you to know that I do appreciate having such a great place to go when one needs to do so."

Virginia Nugent (right), University Hospital's consumer analyst, listens to comments (they were favorable) from a family waiting for a relative in the emergency room area.

HELP.

It's what you do. It's what you are. It's what you, as a physician, strive to give every patient. In every way.

Sometimes, a patient's needs require specialized help. When the need arises, Tidewater Psychiatric Institute stands ready to augment your care.

At TPI, help takes many forms, through a comprehensive program of patient-oriented diagnostic, consultative and psychiatric treatment services within a therapeutic setting. Individually designed treatment programs meet the particular needs of both adult and adolescent patients. Our hospital's school allows adolescents to continue their education while at TPI. A special program exists for the detoxification and rehabilitation of the individual with alcohol or drug-related problems.

You are invited to investigate personally, by telephone or through

correspondence, the avenues of specialized help available to your patient at our facilities in Norfolk and Virginia Beach.

tpi TIDEWATER PSYCHIATRIC INSTITUTE

1701 Will-O-Wisp Dr., Va. Beach, Va. 23454
CALL COLLECT (804) 481-1211
1005 Hampton Blvd., Norfolk, Va. 23507
CALL COLLECT (804) 622-2341

Accredited by The Joint Commission on the Accreditation of Hospitals.
Approved for Blue Cross, Champus, Medicare and other health coverage.

The Month in Washington

• From the Washington Office of the American Medical Association.

THE continual improvement in our health system, with its ever-increasing responsiveness to the people's needs, must not be stifled by adopting foreign-flavored elements into a national health insurance plan, the American Medical Association has told the Congress.

"When considering a national plan for this country, it is necessary to take cognizance of the strengths of our own method of health care delivery . . . this will assure that our excellent system will continue to improve and will not suffer the stifling effects experienced in other countries," AMA President Max H. Parrott, M. D., testified before a subcommittee of the House Ways and Means Committee.

Pointing to the large problems involved in creating a national health insurance program, Doctor Parrott, a Portland, Oregon, practitioner, said that the public attitudes toward it are changing steadily.

"These problems have been brought into better focus as a result of evidence of the effects of governmentally administered and controlled programs both here and abroad.

"Our national priorities have also shifted because of the effects of the changing economy, and the devastating effects of inflation on all segments of our society.

"The public has expressed among its major priorities a concern with inflation, with the state of the economy, and with crime. National polls have indicated that national health insurance is of low concern.

"During this same period of time significant changes have taken place in our health system through increased manpower programs, increased facilities construction, increased levels of private health insurance coverage, and a variety of other programs. There is fuller realization and acknowledgment that this country's health system—under attack by many in the course of the NHI debate—is indeed superior to any other in the world," Doctor Parrott said.

Doctor Parrott and Richard E. Palmer, M. D., of Alexandria, Virginia, the President Elect of the AMA, reminded the subcommittee members of the medical profession's national health insurance plan (H.R. 6222) which builds on the structure of the present system of employer-employee group health insurance plans, mandating each employer to provide comprehensive and catastrophic benefit coverage with the employer picking up at least 65 per cent of the cost.

Doctor Palmer stated:

"We must avoid the mistake inherent in proposals such as H.R. 21 (Kennedy-Corman) which would lock medicine into a rigid, monolithic, no-choice bureaucratic system. Such a creation would be impossible to reverse. It would be an undertaking full of promise but empty of fulfillment. Establishment of cost control through fixed budgets including arbitrary fee schedules would result in curtailment of care and discourage participation by providers. A look at the current trouble of the British health care system impels a close reexamination of the alleged need for such drastic action, as is embodied in H.R. 21. In our opinion justification for such a program is totally lacking!"

Alluding to other measures aimed at providing catastrophic health insurance alone, Doctor Palmer observed that 135 million Americans under 65 carried major medical insurance in 1974.

Jurisdictional Dilemma

The National Health Insurance hearings on Capitol Hill have been marked so far by a notable lack of excitement or sense of urgency. The national news media have ignored the first legislative hearings of the year on NHI, underscoring contentions by many witnesses that the public doesn't rate NHI high on its scale of worries or interests.

Nonetheless, the recently announced decision that the House Interstate and Foreign Commerce Committee's Subcommittee on Health will conduct NHI hearings, brings into the open anew the odd jurisdictional dilemma that perplexes Congress in its quest for action on NHI. Rep. Paul Rogers (D-Fla.) has announced his House Commerce Subcommittee on Health will start NHI hearings. He plans to call first the chief Congressional sponsors of the major NHI bills to testify. Rogers is telling the House Ways and Means Committee in unmistakable terms that he wants a piece of the NHI action, perhaps the big piece.

The Ways and Means Subcommittee on Health, headed by Rep. Dan Rostenkowski (D-Ill.), will end six weeks of hearings on NHI just as Rogers gets started. Relations between the rival panels and their staff members are strained.

GROUP INSURANCE

Officially sponsored by

WEST VIRGINIA STATE MEDICAL ASSOCIATION

SOUND PROTECTION

at a

SUBSTANTIAL SAVING IN COST

Please Send Me Descriptive Brochure On—

☐ **LONG TERM DISABILITY INCOME PROTECTION**
(Pays you a regular monthly benefit up to $2,000 per month when you are disabled)

☐ **$15,000 MAJOR HOSPITAL PLAN**
Covers you and your family up to $15,000 per person

☐ **LOW-COST LIFE INSURANCE**
In units of — $10,000 - $20,000 - $30,000 - $40,000 - $50,000

☐ **$100,000 ACCIDENTAL DEATH & DISMEMBERMENT INSURANCE**
Around the clock protection — 24 hours a day . . . 365 days a year . . . world wide

☐ **OFFICE OVERHEAD DISABILITY POLICY**
(Pays your office expense up to $3,500 per mo. while you are disabled)

☐ **A MUTUAL FUND PROGRAM**
Designed to qualify under HR-10

☐ **A MILLION DOLLAR CATASTROPHE LIABILITY POLICY**
(Covers: Malpractice—Home—Personal—Auto Liability)

Name _____ Address _____

MAIL TO: ADMINISTRATOR
McDONOUGH-CAPERTON-SHEPHERD-GOLDSMITH
P. O. BOX 1551 CHARLESTON, W. VA. (25326)

NOTE: A full time service representative travels the State and is always available for personal consultation. Your Resident Administrator provides complete service here in the State including processing and payment of claims.

Obituaries

R. STUART VanMETRE, M. D.

Dr. R. Stuart VanMetre of Barboursville, who retired in 1964, died on November 23 in a Huntington hospital. He was 79. A native of Van Clevesville, in Berkeley County, Doctor VanMetre was graduated from West Virginia University and received his M. D. degree in 1925 from the Medical College of Virginia. He was a member of the American Medical Association and a former member of the Cabell County Medical Society and the West Virginia State Medical Association.

A veteran of World War I and II, Doctor VanMetre also was a member of the American Academy of Family Physicians.

Survivors include the widow; two daughters, Mrs. Mike Abraham of Barboursville, with whom he made his home, and Mrs. E. S. Wenzel, Florham Park, New Jersey; one son, Robert S. VanMetre, Jr., Northbrook, Illinois; three sisters, Miss Emma VanMetre, Martinsburg; Mrs. Elizabeth Sturgis, Newport Beach, California, and Mrs. Evelyn Brumbaugh, Silver Springs, Maryland; and one brother, Joseph B. VanMetre, Garden City, Michigan.

* * *

ROBERT S. BARRETT, M. D.

Dr. Robert S. Barrett of Huntington, a retired family physician, died on November 11 in a hospital there. He was 67. A native of Newport News, Virginia, he was graduated from William and Mary College and received his M. D. degree in 1934 from the Medical College of Virginia.

Doctor Barrett served his internship at Tucker Sanatorium in Richmond, Virginia, and at St. Mary's Hospital in Huntington. He was a retired Lieutenant Colonel of the U. S. Air Force, having served during World War II from 1940 to 1946. He was a member of the Cabell County Medical Society, the West Virginia State Medical Association and the American Medical Association.

Surviving are the widow and one daughter, Mrs. Grace Arons of San Francisco.

* * *

EVERETT H. STARCHER, M. D.

Dr. Everett H. Starcher of Ripley died on August 29, 1975, in an Ashland, Kentucky, nursing home. He was 78. Doctor Starcher practiced in Logan County from 1926 to 1966, when he retired and moved to Ripley.

A member of the State Medical Association's Council from 1953 to 1956, Doctor Starcher was President of the Logan County Medical Society in 1948 and a past Secretary of the Society. He practiced at Sharples, Omar and Earling in Logan County prior to entering the U. S. Army Medical

(Continued on Page xvi)

PRESCRIBING INFORMATION
Antiminth (pyrantel pamoate) **Oral Suspension**
Actions. Antiminth (pyrantel pamoate) has demonstrated anthelmintic activity against *Enterobius vermicularis* (pinworm) and *Ascaris lumbricoides* (roundworm). The anthelmintic action is probably due to the neuromuscular blocking property of the drug.
Antiminth is partially absorbed after an oral dose. Plasma levels of unchanged drug are low. Peak levels (0.05-0.13μg/ml.) are reached in 1-3 hours. Quantities greater than 50% of administered drug are excreted in feces as the unchanged form, whereas only 7% or less of the dose is found in urine as the unchanged form of the drug and its metabolites.
Indications. For the treatment of ascariasis (roundworm infection) and enterobiasis (pinworm infection).
Warnings. *Usage in Pregnancy:* Reproduction studies have been performed in animals and there was no evidence of propensity for harm to the fetus. The relevance to the human is not known.
There is no experience in pregnant women who have received this drug.
Precautions. Minor transient elevations of SGOT have occurred in a small percentage of patients. Therefore, this drug should be used with caution in patients with pre-existing liver dysfunction.
Adverse Reactions. The most frequently encountered adverse reactions are related to the gastrointestinal system.
Gastrointestinal and hepatic reactions: anorexia, nausea, vomiting, gastralgia, abdominal cramps, diarrhea and tenesmus, transient elevation of SGOT.
CNS reactions: headache, dizziness, drowsiness, and insomnia. Skin reactions: rashes.
Dosage and Administration. *Children and Adults:* Antiminth Oral Suspension (50 mg. of pyrantel base/ml.) should be administered in a single dose of 11 mg. of pyrantel base per kg. of body weight (or 5 mg./lb.); maximum total dose 1 gram. This corresponds to a simplified dosage regimen of 1 cc. of Antiminth per 10 lb. of body weight. (One teaspoonful = 5 cc.)
Antiminth (pyrantel pamoate) Oral Suspension may be administered without regard to ingestion of food or time of day, and purging is not necessary prior to, during, or after therapy. It may be taken with milk or fruit juices.
How Supplied. Antiminth is available as a pleasant tasting caramel-flavored suspension which contains the equivalent of 50 mg. pyrantel base per ml., supplied in 60 cc. bottles and Unitcups™ of 5 cc. in packages of 12.

ROERIG Pfizer
A division of Pfizer Pharmaceuticals
New York, New York 10017

WORMS BLITZED

A single dose of Antiminth (1 cc. per 10 lbs. of body weight, 1 tsp./50 lbs.—maximum dose, 4 tsp.=20 cc.) offers highly effective control of *both* pinworms and roundworms.

Antiminth has been shown to be extremely well tolerated by children and adults alike in clinical studies.* Pleasantly caramel-flavored, it is non-staining to teeth and oral mucosa on ingestion... doesn't stain stools, linen or clothing.

One prescription can economically treat the entire family.

ROERIG Pfizer
A division of Pfizer Pharmaceuticals
New York, New York 10017

NSN 6505-00-148-6967

Pinworms, roundworms controlled with a single, non-staining dose of

ANTIMINTH®

(pyrantel pamoate)

equivalent to 50 mg. pyrantel/ml.

ORAL SUSPENSION

*Data on file at Roerig.

Please see prescribing information on facing page.

OBITUARIES—(Continued from Page xiv)

Corps in 1941. He began practice in Logan following his discharge in 1946.

Doctor Starcher was a former Logan County Health Officer. He was graduated from West Virginia University and received his M. D. degree in 1925 from the Medical College of Virginia. He interned at Western Pennsylvania Hospital in Pittsburgh.

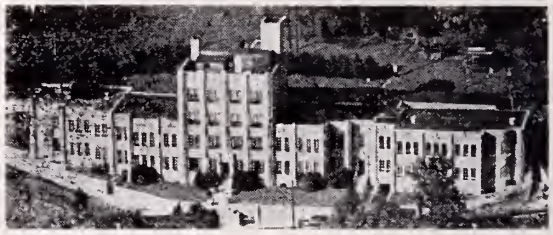
A native of Given, in Jackson County, Doctor Starcher taught school briefly in Kanawha and Logan counties before beginning his college studies. He was a member of the Parkersburg Academy of Medicine, the West Virginia State Medical Association and the American Medical Association.

Surviving are the widow; and two daughters, Mrs. Kirk Dansereau of Bowling Green, Kentucky and Mrs. Earl C. Stephens of Parkersburg.

Health Information Levels

Inner-city parents "have a significantly lower level of health information" when compared to their suburban counterparts, a Northwestern University researcher has reported in the December issue of *Pediatrics*, the monthly scientific journal of the American Academy of Pediatrics.

William A. Tomlinson, M. D., from the Department of Pediatrics at Northwestern University's Medical School, said his research involved a questionnaire distributed to parents in a Chicago inner-city clinic as well as parents in a suburban Evanston, Illinois private pediatric practice.



Radiology:
Karl J. Myers, Sr., M. D.

Pathology:
Fulvio Franyutti, M. D.

Surgery:
Hu C. Myers, M. D.
A. Kyle Bush, M. D.
T. H. Chang, M. D.
J. W. Woodford, M. D.
A. Richard Weaver, M. D.

Gynecology and Obstetrics:
Raymond W. Cranlund, M. D.

Internal Medicine:
E. G. Guy, M. D.
B. G. Thimmappa, M. D.
Karl J. Myers, Jr., M. D.
Amitava Ghosal, M. D.

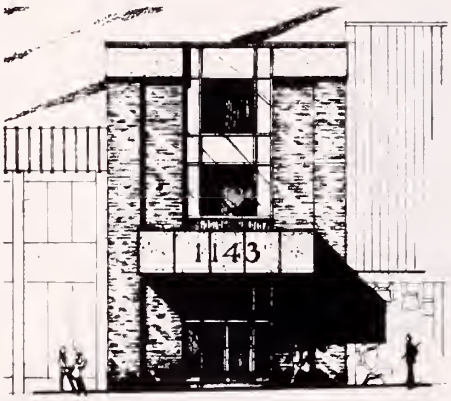
Pediatrics:
E. G. Kreider, M. D.
J. M. Nissley, M. D.

Dentistry:
Glenn B. Paling, D. D. S.

Family Practice:
Alan S. Petersan, M. D.

THE MYERS CLINIC
Philippi, West Virginia

MEDICAL OFFICE SPACE AVAILABLE



The New Windsor Manor

Brand New Commercial Space

SUITES FROM SMALL OFFICES UP TO 10,000 SQ. FT. NOW LEASING

- LOCATED—In well-trafficked downtown Wheeling next to large parking facility.
- MAINTAINED FULLY—Completely carpeted.
- UTILITIES INCLUDED—Area controlled electric heating and air conditioning.
- PRIVATE ENTRANCES to this fire-safe building. Maximum security.

For Information Contact: **WINDSOR MANOR RENTAL OFFICE**
304/233-4650
or
THE JOSEPH SKILKEN ORGANIZATION
383 S. Third St., Columbus, Ohio 43215
614/221-4547
Brokers fully protected.

County Societies

CABELL

The Cabell County Medical Society met on November 13 at the Gateway Inn in Huntington. Dr. C. A. Hoffman of Huntington gave an interesting talk regarding his year as President of the AMA and answered questions.

Dr. Gerald E. Vanston, President, read a letter from the State Department of Welfare giving details of a job opportunity for one physician in this area. Doctor Vanston also announced the passing of Dr. Robert S. Barrett of Huntington on November 11.—Colin M. Craythorne, M. D., Secretary.

* * *

MARION

The Marion County Medical Society met on October 28 at the Fairmont Field Club. Dr. G. Thomas Evans gave a report on the State Medical Association's WVU Liaison Committee, on which he serves. He reported that the lack of funds at the WVU Medical Center had been discussed by the committee. Dr. J. A. Rizzo suggested that our individual members and the Society should take steps to encourage graduates of the WVU Medical Center to establish practice in Marion County.—Jack C. Morgan, M. D., Acting Secretary.

* * *

McDOWELL

The McDowell County Medical Society met on November 12 at the Ember Glo Restaurant in Welch. Dr. Jack Leckie of Huntington, President of the State Medical Association, and Mrs. Leckie, were guests of the Society.

Doctor Leckie addressed the Society about some of the problems concerning medicine and the future of medicine in West Virginia as it affects all practicing physicians. Despite the many criticisms of medical care in the United States today, Doctor Leckie asked us to view more positively the good points of medical care as we are practicing it.

After questions were answered by Doctor Leckie, Mr. Doug Wall, Account Supervisor in Charleston for The Aetna Life and Casualty Company, presented some of the problems of the malpractice insurance program from the standpoint of the insurance companies.

The following officers were elected for 1976: Drs. Joseph C. Ray, President; Muthusami Kuppusami, Vice President; Arthur A. Carr, Secretary; and N. V. Carandang, Treasurer.—Arthur A. Carr, M. D., Secretary.

* * *

MERCER

The Mercer County Medical Society met on November 17 at the Dinner Bell Restaurant in

(Continued on Next Page)

BURDICK'S EK/5A CARDIOGRAPH —NOW WITH NEW PATIENT ISOLATION

—and unique automatic lead marking

Engineering advancements that made the Burdick EK/5 highly respected by the medical profession have been retained in the new EK/5A that also gives you new patient isolation (extremely low leakage current for maximum patient safety) and automatic lead marking activated by the lead selector switch.

Important refinements have also been added: long-life gold contacts on circuit boards, fewer and smaller circuit boards, high safety margins on components.

But safety and service-free operation are not the whole story! Burdick gives you operating convenience, diagnostic accuracy, reliable performance — all in a smartly styled 17-lb. instrument.

•

Write us today for a demonstration in your office.

General Medical WEST VIRGINIA

2400 — FOURTH AVE.

HUNTINGTON, WEST VIRGINIA

COUNTY SOCIETIES—(Continued from Page xvii)

Princeton. The guest speaker was Dr. Meinhard Robinow, a pediatrician, now in charge of the Genetic Clinic at the University of Virginia Hospital. Doctor Robinow traced the history of genetics, genetic counseling and diagnosis from 1900 to the present. He stated that many birth defects could be ascertained prior to delivery with the use of amniocentesis.

The following officers were nominated for 1976: Drs. T. Keith Edwards, President; Roy R. Raub, Vice President; and David F. Bell, Jr., Secretary-Treasurer.—John J. Mahood, M. D., Secretary.

* * *

MONONGALIA

The Monongalia Medical Society met on November 4 at the Hotel Morgan in Morgantown. There were 66 members and one guest present. The speaker for the evening was Dr. Michael T. Hogan of the West Virginia University Medical Center, who spoke on "A Survey of the Uses of Ultra-Sound in Medicine."

The membership approved the nomination by the President of the names of six physicians to be submitted for a seat on one of the Claim Review Panels being established as part of the professional liability insurance agreement between the State Medical Association and The Aetna Life and Casualty Company.—H. Summers Harrison, M. D., Secretary.

VENEREAL DISEASE SERVICES

♦

24-Hour Toll-Free Number

♦

- CASE REPORTING
- DARKFIELD EXAMINATION
- V. D. CONSULTATION
- CASE FOLLOW-UP

♦

Dial 800-642-8244

♦

WEST VIRGINIA STATE DEPARTMENT OF HEALTH

BLUEFIELD SANITARIUM CLINIC

525 BLAND STREET

BLUEFIELD, W. VA.

SURGERY

General:
HAMPTON ST. CLAIR, M. D.
EDWARD J. FLYNN, M. D.
R. A. RANA, M. D.

Thoracic and Cardiovascular:
R. W. NEILSON, JR., M. D.
JAMES P. THOMAS, M. D.

Neurosurgery:
WM. F. HILLIER, M. D.
E. L. GAGE, JR., M. D.

Urology:
STEVE J. MISAK, M. D.

Eye, Ear, Nose & Throat:
F. D. WHITE, M. D.

PEDIATRICS
GRADY McRAE, M. D.
E. M. SPENCER, M. D.

OBSTETRICS & GYNECOLOGY
E. W. McCAULEY, M. D.
CHARLES S. FLYNN, M. D.
T. KEITH EDWARDS, M. D.

INTERNAL MEDICINE
J. R. SHANKLIN, M. D.
KARL E. WEIER, M. D.
H. F. WARDEN, JR., M. D.
C. D. PRUETT, M. D.
R. O. ROGERS, JR., M. D.

NUCLEAR MEDICINE
C. D. PRUETT, M. D.
R. O. ROGERS, M. D.

PATHOLOGY
DAVID F. BELL, JR., M. D.
JOHN J. BRYAN, M. D.

ROENTGENOLOGY
GEORGE C. KING, M. D.
JOHN A. ANZIULEWICZ, M. D.

ANESTHESIOLOGY
DAVID H. GATHERUM, M. D.

EMERGENCY SERVICE
S. K. CHOPRA, M. D.
R. P. BHASIN, M. D.

BUSINESS MANAGER
JAMES L. FOSTER

FEBRUARY
1976

Vol. 72 No. 2

The WEST VIRGINIA Medical Journal

Official Organ of the West Virginia State Medical Association

Box 1031 Charleston, W. Va. 25324

EDITOR
George F. Evans, M. D. (1981)
Clarksburg

MANAGING EDITOR AND BUSINESS MANAGER
Mr. Charles R. Lewis
Charleston

EXECUTIVE ASSISTANT
Mr. Custer B. Holliday
Charleston

ASSOCIATE EDITORS

E. J. Van Liere, M. D. (1976)
Morgantown

Stephen D. Ward, M. D. (1977)
Wheeling

John M. Hartman, M. D. (1978)
Charleston

Vernon E. Duckwall, M.D.(1979)
Elkins

Thomas J. Holbrook, M.D.(1980)
Huntington

Joe N. Jarrett, M. D. (1982)
Oak Hill

Published monthly by the West Virginia State Medical Association under the direction of the Publication Committee. Original articles are accepted on condition that they are contributed solely to The Journal.

Entered as second-class matter January 1, 1926, at the post office at Charleston, West Virginia, under the act of March 3, 1879.

Subscription Rates: $10 a year in the U.S.A.; $15 in foreign countries; $2 per single copy. Advertising rates furnished on request. Address all communications to Business Manager, The West Virginia Medical Journal, Box 1031, Charleston, West Virginia 25324. Phone 346-0551.

Microfilm editions beginning with the 1972 volume are available from University Microfilms, Inc., 300 N. Zeeb Road, Ann Arbor, Michigan 48106.

Member 1976

CONTENTS

Scientific Articles

Insulin Hypersensitivity With Insulin Resistance—R. Gregory McMorrow, M. D.; and Lewis H. McConnell, M. D. 25
Colotomy and Polypectomy (A Review)—Gabriel E. Al-Hajj, M. D.; E. Schrae LaPlante, M. D.; and Bernard Zimmermann, M. D. 28
Treatment of Hemorrhagic Radiation Cystitis With Formalin—John A. Belis, M. D.; and D. Franklin Milam, M. D. 31
Ultrasonic Evaluation of the Abdominal Aorta—Michael T. Hogan, M. D. 36

The President's Page

How About This, AMA?—Jack Leckie, M. D., President, W. Va. State Medical Association 38

Editorials

Good Old Days: Hopefully, We Can Return 39
Standout in a Field Where That's Not Easy 40

General News

AMA President To Address Annual Meeting 41
Malpractice Bill Goes to Legislature 42
Dr. Sauder Assumes Heart Assn. Presidency 42
Continuing Education Activities 43
Council Reviews Legislation 43
Public Health Trust Formalized 45
Seminar on Depression 46
Renal Symposium 46
Changes in Medical Education 47
Officers of Component Societies 47
Journal Readership Survey Notice 48
Association Announces Alaskan Tour 48

Special Departments

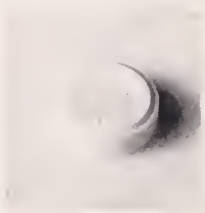
WVU Medical Center News x
The Month in Washington xii
Obituaries xiv
County Societies xviii
Classified Section xxi
Index to Advertisers xxii

respond to one

According to her major symptoms, she is a psychoneurotic patient with severe anxiety. But according to the description she gives of her feelings, part of the problem may sound like depression. This is because her problem, although primarily one of excessive anxiety, is often accompanied by depressive symptomatology. Valium (diazepam) can provide relief for both—as the excessive anxiety is relieved, the depressive symptoms associated with it are also often relieved.

There are other advantages in using Valium for the management of psychoneurotic anxiety with secondary depressive symptoms: the psychotherapeutic effect of Valium is pronounced and rapid. This means that improvement is usually apparent in the patient within a few days rather than in a week or two, although it may take longer in some patients. In addition, Valium (diazepam) is generally well tolerated; as with most CNS-acting agents, caution patients against hazardous occupations requiring complete mental alertness.

Also, because the psychoneurotic patient's symptoms are often intensified at bedtime, Valium can offer an additional benefit. An *h.s.* dose added to the *b.i.d.* or *t.i.d.* treatment regimen can relieve the excessive anxiety and associated depressive symptoms and thus encourage a more restful night's sleep.



Valium® (diazepam) IV

2-mg, 5-mg, 10-mg scored tablets

in psychoneurotic anxiety states with associated depressive symptoms

surveillance because of their predisposition to habituation and dependence. In pregnancy, lactation or women of childbearing age, weigh potential benefit against possible hazard.

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

ROCHE

Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

THE 5 RELIABLE ROBITUSSINS can really help clear the respiratory tract. All contain guaifenesin,* the expectorant that works systemically to help stimulate the output of lower respiratory tract fluid. This enhanced flow of less viscid secretions promotes ciliary action and makes thick, inspissated mucus less viscid and easier to raise.

*formerly named Glyceryl Guaiacolate

For productive and unproductive coughs

ROBITUSSIN®

Each 5 ml teaspoonful contains:
Guaifenesin, NF. . . . . 100 mg
Alcohol, 3.5%

For severe coughs

ROBITUSSIN A-C® ℃

Each 5 ml teaspoonful contains:
Guaifenesin, NF. . . . . 100 mg
Codeine Phosphate, USP. . . . . 10.0 mg
(warning: may be habit forming)
Alcohol, 3.5%

Non narcotic for 6-8-hr. cough control

ROBITUSSIN-DM®

Each 5 ml teaspoonful contains:
Guaifenesin, NF. . . . . 100 mg
Dextromethorphan Hydrobromide, NF. . . . . 15 mg
Alcohol, 1.4%

Decongests nasal passages and sinus openings as it helps relieve coughs

ROBITUSSIN-PE®

Each 5 ml teaspoonful contains:
Guaifenesin, NF. . . . . 100 mg
Pseudoephedrine** Hydrochloride, NF. . . . . 30 mg
Alcohol, 1.4%
**Formerly contained Phenylephrine Hydrochloride 10 mg

Decongestant action helps control cough and clear stuffy nose and sinuses. Non narcotic.

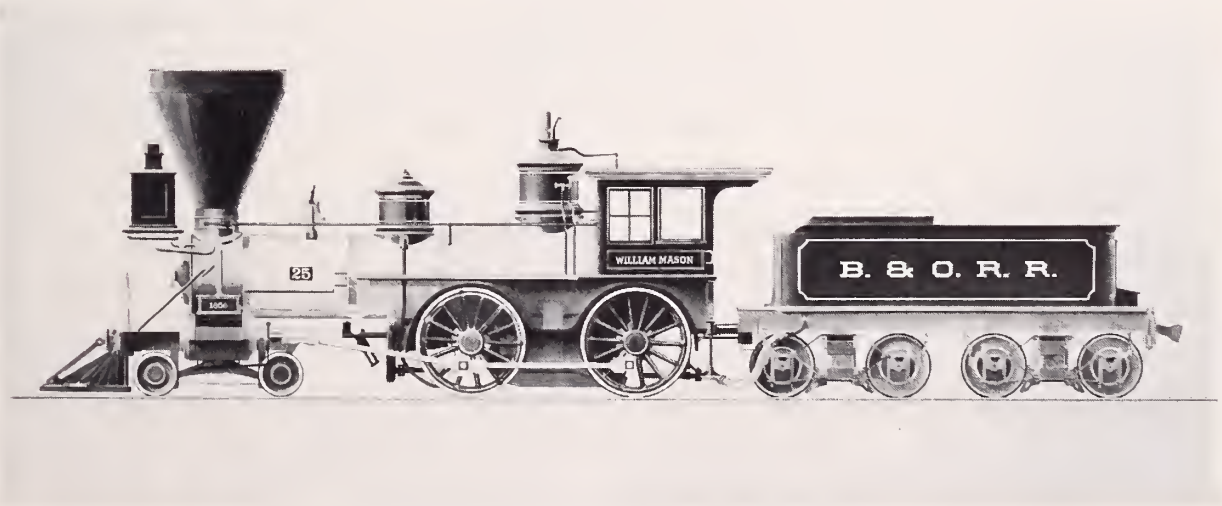
ROBITUSSIN-CF®

Each 5 ml teaspoonful contains:
Guaifenesin, NF. . . . . 50 mg
Phenylpropanolamine Hydrochloride, NF. . . . . 12.5 mg
Dextromethorphan Hydrobromide, NF. . . . . 10 mg
Alcohol, 1.4%

All Robitussin formulations available on your Rx or Recommendation.

A. H. Robins Company, Richmond, Va. 23220 A·H·ROBINS

For many years Robins has spotlighted the expectorant action of the Robitussin cough formulations by featuring action photographs of steam engines. In keeping with this tradition, the company recently commissioned a well-known illustrator to render full-color drawings of several classic locomotives... accurate to the minutest detail. The first of the series is now available. To order your print suitable for framing, write "Robitussin Clear-Tract Engine #1" on your Rx pad and mail to "Vintage Locomotives," Dept. T4, A. H. Robins Company, 1407 Cummings Drive, Richmond, Va. 23220.



The William Mason (1856)

WVU Medical Center
—News—

A TEAM of West Virginia University Medical Center researchers has succeeded in isolating human tumor associated substances (antigens) which may be useful in the diagnosis, prognosis and treatment of lung cancer.

Working in the second year of a contract from the National Cancer Institute, the team of 20 microbiologists, biochemists, pathologists, clinicians and technicians has tested these substances with antisera prepared in animals.

Chief investigator is Robert Veltri (Ph. D.), Associate Professor of Otolaryngology and Microbiology, WVU School of Medicine. The research is conducted in the laboratories of Philip M. Sprinkle (M. D.), Chairman of Otolaryngology, an associate investigator.

H. F. Mengoli (Ph. D.), P. E. Maxim (Ph. D.), R. G. Burrell (Ph. D.), microbiologists, and G. H. Wirtz (Ph. D.), biochemist, have made significant research contributions. The participation of the Departments of Pathology and Surgery in this interdisciplinary project has been invaluable.

First begun in May, 1974, under a research grant of $103,000, the study is now funded through May, 1976, with a renewal grant of $114,000. It is part of the NCI's widespread program on immunodiagnosis initiated after the enactment of the National Cancer Plan in 1971. Established goals set up priority funding of contracts and grants with medical and research centers in the United States.

Diagnostic Test The Goal

The aim of the WVU research is the development of a diagnostic test for cancer or predisposition to cancer of the lung. Such a test would detect the presence of malignant cells before symptoms appear by indications of lung cancer specific antigens or their antibodies in the blood.

"In the first year of the contract, our objective was to isolate and identify new tumor-associated antigens, unique substances produced by the cancer cells of patients with lung carcinoma," explained Doctor Veltri.

The research started with the painstaking extractions of 25 lung tumors. Four breast tumors, five colon tumors and several normal tissues were similarly studied.

Doctor Veltri explained the other tumors and normal tissues were analyzed to determine whether the substances isolated were specific to lung cancer or whether they were also manifested normally or in other types of carcinoma.

"By an elaborate procedure that entails immunochemical, biochemical and physical methods, we were able to isolate and identify in human lung cancer at least three antigens. We have reported on them to the National Cancer Institute," he continued.

"One of the substances appears to be a normal protein produced in great excess. But that does not rule it out as having diagnostic potential. For example, normal hormones can be produced in great excess in cancer patients.

"The other two may be specifically associated with lung cancer. Everything we have been able to find out so far indicates they are not normal serum proteins."

Not only were the researchers able to isolate and identify the antigens, but they have purified the substances and are now working on the development of immunodiagnostic tests.

Doctor Veltri and his research team immunized several hundred rabbits with numerous extracts from four lung cancers containing both tumor specific and normal cell components, took blood from the animals and began the laborious task of antigenic analysis—finding antibodies in the serum which reacted only to the tumor substances.

The research and development of immunodiagnostic tests is expected to continue through the second and into the third year of the research study. Doctor Veltri indicated that early screening of lung cancer patient sera will begin in the third year.

"We are currently applying for our renewal and prospects are good we will be funded for a third year," he said.

The immunodiagnostic tests will employ blood and occasionally biopsy tissue of patients. These specimens are mixed with tumor-specific animal antisera and reactions observed and interpreted. This will be done with normal controls, patients with lung diseases such as chronic bronchitis, tuberculosis or emphysema as well as with patients with carcinoma of the lung and other sites.

• Compiled from material furnished by Mrs. Mary Ellin Wylie, Director, Medical Center News and Information Services, Morgantown, W. Va.

THE WHEELING CLINIC

EOFF AT 16th STREET

WHEELING, WEST VIRGINIA

General Surgery:
J. O. Rankin, M. D.
C. D. Hershey, M. D.
E. C. Vass, M. D.

Ophthalmology:
W. F. Park, M. D.
M. E. Nugent, M. D.
R. V. Pangilinan, M. D.

Ear, Nose & Throat:
W. A. Tiu, M. D.
A. G. Matadar, M. D.

Orthopedic Surgery:
E. L. Barrett, M. D.

Thoracic Surgery:
Daniel W. Dickinson, M. D.

Obstetrics and Gynecology:
Robert W. Leibold, M. D.
Robert T. Brandfass, M. D.
A. Athari, M. D.
J. W. Campbell, M. D.

Urology:
D. C. Trapp, M. D.

Dermatology:
K. W. Waterson, M. D.
Sheldon Widlan, M. D.

Internal Medicine:
Charles H. Hiles, M. D.
Albert M. Valentine, M. D.
T. E. Chvasta, M. D.
B. L. Van Pelt, M. D.
P. R. Hedges, M. D.
C. L. Beall, M. D.
C. A. Vasquez, M. D.

Psychiatry:
Stephen D. Ward, M. D.
David Hill, M. D.
David H. Smith, M. D.
Robert L. Mendelson, Ed D.

Neurology:
Albert L. Wanner, M. D.
Henry L. Kettler, M. D.

Roentgenology:
A. K. Butler, M. D.
J. N. Aceto, M. D.

Speech Pathologist and Audiologist:
James P. Frum, M. S.

Clinical Laboratories:
Donna Burlenski
Donna Bryan

Physician Assistants:
Joann Green, P. A.
Michael G. Siman, P. A.

Technologists:
Electrocardiography:
Betty Maguire, R. N.
Brenda Muklewicz, R. N.
Electroencephalography:
Juanita Stone, R. N.
Roentgenology:
Evelyn Forester, R. T.

Administration:
Lester L. Cline, Manager
Henry L. Castilow, Asst. Mgr.

General and Thoracic Surgery
Stephen T. J. Lee, M. D.
James A. Gardner, M. D.

Orthopedics
Clifford A. Stevenson, M. D.
S. A. Zahir, M. D.
Mario C. Ramos, M. D.
George Orphanos, M. D.

Obstetrics-Gynecology
A. Ray Jacobson, M. D.
Mariamma Abraham, M. D.

Ophthalmology
Edward T. Liu, M. D.

Urology
S. L. Francis, M. D.

Southern West Virginia Clinic

Stanaford Road, P. O. Box 50
Beckley, West Virginia 25801
Phone (304) 252-7331

Internal Medicine
Preston C. Davis, M. D.
Joseph A. Maiolo, M. D.
Eugene Warvariv, M. D.
R. James Yates, M. D.
S. L. Bembalkar, M. D.

Pediatrics
P. B. Gogo, M. D.
Raquel S. Israel, M. D.

Radiology
Thomas L. Martin, M. D.

Clinic Manager
James P. Bland

The Month in Washington

• From the Washington Office of the American Medical Association.

THE public interest would be better served if the nation examined the goals of a national health insurance program within the context of the existing health care system and directed its energies toward the perfection of that system, the American Medical Association said recently in testimony before a subcommittee of the House Interstate and Foreign Commerce Committee.

"It is unnecessary to gamble on a whole new medical health system in order to meet the health care needs of all Americans," AMA President Max H. Parrott told the Public Health and Environment Subcommittee.

Pointing to the large problems involved in creating a national health insurance program, Doctor Parrott, a Portland, Oregon, practitioner, said that public attitudes toward it are changing steadily.

"These problems have been brought into better focus as a result of evidence of the effects of governmentally administered and controlled programs both here and abroad.

"Our national priorities have also shifted because of the effects of the changing economy, and the devastating effects of inflation on all segments of our society.

"Significant changes have taken place in our health system through increased manpower programs, increased facilities construction, increased levels of private health insurance coverage, and a variety of other programs. There is fuller realization and acknowledgment that this country's health system—under attack by many in the course of the NHI debate—is indeed superior to any other in the world," Doctor Parrott said.

Doctor Parrott told the subcommittee members of the medical profession's national health insurance plan (H.R. 6222) which builds on the structure of the present system of employer-employee group health insurance plans, mandating each employer to provide comprehensive and catastrophic benefit coverage with the employer picking up at least 65 per cent of the cost.

Employees, according to the AMA spokesmen, would not be compelled to participate. The self-employed as well as the non-employed could purchase qualified private health insurance, through pools if needed, at a cost not more than 125 per cent of the cost of group plans. And, after a certain level of co-insurance is reached, depending upon income, the insurance would cover all remaining costs as a complete protection against catastrophic costs.

Doctor Parrott pointed out that in pressing for the adoption of any particular NHI proposal, sincerity must not be confused with objectivity—"We cannot afford to have a program of such importance fail.

"We must avoid the mistake inherent in those proposals which would lock medicine into a rigid, monolithic, no-choice bureaucratic system. Such a creation would be impossible to reverse. It would be an undertaking full of promise but empty of fulfillment. Establishment of cost control through fixed budgets including arbitrary fee schedules would result in curtailment of care and discourage participation by providers.

"A look at the current trouble of the British health care system impels a close re-examination of the alleged need for such drastic action," Doctor Parrott said.

Medicare Amendments

The Senate Finance Committee also approved with few changes Medicare Amendments adopted earlier by the House. The major one assures that no prevailing Medicare fee for this fiscal year is less than for the previous fiscal year. An unintended effect of the new law tying physicians' Medicare reimbursement in with a cost-of-living-type index was to roll back some fees. HEW didn't want to do anything about it, but the House, at the urging of the AMA and other groups, agreed to prevent the rollback.

The Senate committee added language to the House provision to indicate that in calculating the controversial fee index HEW should include to the extent feasible "factors related to any increases in costs of malpractice insurance and that index calculations should be prepared on a regional rather than a national basis."

The other Medicare changes include:

—A one-year extension of authority to grant waivers of nursing staff requirements in rural areas where nurses are in short supply. The House had approved a three-year extension.

—Repeal of a present provision which would make the Federal Employees Health Program rather than Medicare the primary payer of benefits for older or retired U. S. workers. The amendment specifies that Medicare be the primary payer for people eligible for both programs.

GROUP INSURANCE

Officially sponsored by

WEST VIRGINIA STATE MEDICAL ASSOCIATION

SOUND PROTECTION

at a

SUBSTANTIAL SAVING IN COST

Please Send Me Descriptive Brochure On—

☐ **LONG TERM DISABILITY INCOME PROTECTION**
(Pays you a regular monthly benefit up to $2,000 per month when you are disabled)

☐ **$15,000 MAJOR HOSPITAL PLAN**
Covers you and your family up to $15,000 per person

☐ **LOW-COST LIFE INSURANCE**
In units of — $10,000 - $20,000 - $30,000 - $40,000 - $50,000

☐ **$100,000 ACCIDENTAL DEATH & DISMEMBERMENT INSURANCE**
Around the clock protection — 24 hours a day . . . 365 days a year . . . world wide

☐ **OFFICE OVERHEAD DISABILITY POLICY**
(Pays your office expense up to $3,500 per mo. while you are disabled)

☐ **A MUTUAL FUND PROGRAM**
Designed to qualify under HR-10

☐ **A MILLION DOLLAR CATASTROPHE LIABILITY POLICY**
(Covers: Malpractice—Home—Personal—Auto Liability)

Name _____ Address _____

MAIL TO: ADMINISTRATOR
McDONOUGH-CAPERTON-SHEPHERD-GOLDSMITH
P. O. BOX 1551 CHARLESTON, W. VA. (25326)

NOTE: A full time service representative travels the State and is always available for personal consultation. Your Resident Administrator provides complete service here in the State including processing and payment of claims.

Obituaries

CHARLES D. HOUCK, M. D.

Dr. Charles D. Houck of Canton, Ohio, formerly of Lewisburg, died on December 14 in a hospital there. He was 55. Doctor Houck was the senior partner of the Canton Orthopedic Clinic.

A native of Lewisburg, Doctor Houck was graduated from Greenbrier Military Academy and West Virginia University, receiving his M. D. degree in 1944 from the Medical College of Virginia. He served his residency in orthopedic surgery at Charleston General Hospital.

Survivors include the widow; five daughters, Mrs. Ruth Bohrer of Philippi; Mrs. Kathryn Sturm, San Francisco; Miss Elizabeth Jo Houck, Bristol, Connecticut; Mrs. Jayn Crail, Wooster, Ohio, and Miss Mary Helen Houck, at home; a son, Charles G. Houck, at home; a sister, Mrs. Eloise Wallace, Clintonville, in Greenbrier County; and a brother, Dr. Marvin R. Houck of Lewisburg and Carbon.

* * *

VERNON L. DYER, M. D.

Dr. Vernon L. Dyer of Petersburg died on November 30 in a hospital there. He was 83. A family physician specializing in the eye, ear, nose and throat, Doctor Dyer began practice in Petersburg in 1919 and retired in April of 1972.

A native of Fort Seybert, in Pendleton County, Doctor Dyer was graduated from Shepherd College and Valparaiso University in Indiana. He received his M. D. degree in 1918 from the Loyola University School of Medicine. He interned at Welch Hospital No. 1 in 1918-19, and completed further studies at the Cook County Post Graduate School in Chicago and the Chicago Eye, Ear, Nose and Throat Hospital.

A veteran of World War I, Doctor Dyer was a Past President and Secretary of the Potomac Valley Medical Society.

In 1963, he was designated as West Virginia's "General Practitioner of the Year" by Governor Arch A. Moore, Jr.

Doctor Dyer was a charter member of the Kiwanis Club in Petersburg, having organized it in 1937 and serving as its first President. While a Kiwanian, he was actively involved in programs for underprivileged children. He also was involved in sight-conservation programs and gave numerous free eye examinations.

He was a member of the Potomac Valley Medical Society, the West Virginia State Medical Association and the American Medical Association.

Survivors include the widow; a daughter, Mrs. Susan Arnette Oliver of Pen Argyl, Pennsylvania; a son, Dr. John A. Dyer, Rochester, Minnesota; two

(Continued on Page xvi)

PRESCRIBING INFORMATION
Antiminth (pyrantel pamoate) Oral Suspension
Actions. Antiminth (pyrantel pamoate) has demonstrated anthelmintic activity against *Enterobius vermicularis* (pinworm) and *Ascaris lumbricoides* (roundworm). The anthelmintic action is probably due to the neuromuscular blocking property of the drug.
Antiminth is partially absorbed after an oral dose. Plasma levels of unchanged drug are low. Peak levels (0.05-0.13μg/ml.) are reached in 1-3 hours. Quantities greater than 50% of administered drug are excreted in feces as the unchanged form, whereas only 7% or less of the dose is found in urine as the unchanged form of the drug and its metabolites.
Indications. For the treatment of ascariasis (roundworm infection) and enterobiasis (pinworm infection).
Warnings. *Usage in Pregnancy:* Reproduction studies have been performed in animals and there was no evidence of propensity for harm to the fetus. The relevance to the human is not known.
There is no experience in pregnant women who have received this drug.
Precautions. Minor transient elevations of SGOT have occurred in a small percentage of patients. Therefore, this drug should be used with caution in patients with pre-existing liver dysfunction.
Adverse Reactions. The most frequently encountered adverse reactions are related to the gastrointestinal system.
Gastrointestinal and hepatic reactions: anorexia, nausea, vomiting, gastralgia, abdominal cramps, diarrhea and tenesmus, transient elevation of SGOT.
CNS reactions: headache, dizziness, drowsiness, and insomnia. Skin reactions: rashes.
Dosage and Administration. *Children and Adults:* Antiminth Oral Suspension (50 mg. of pyrantel base/ml.) should be administered in a single dose of 11 mg. of pyrantel base per kg. of body weight (or 5 mg./lb.); maximum total dose 1 gram. This corresponds to a simplified dosage regimen of 1 cc. of Antiminth per 10 lb. of body weight. (One teaspoonful = 5 cc.)
Antiminth (pyrantel pamoate) Oral Suspension may be administered without regard to ingestion of food or time of day, and purging is not necessary prior to, during, or after therapy. It may be taken with milk or fruit juices.
How Supplied. Antiminth is available as a pleasant tasting caramel-flavored suspension which contains the equivalent of 50 mg. pyrantel base per ml., supplied in 60 cc. bottles and Unitcups™ of 5 cc. in packages of 12.

ROERIG Pfizer
A division of Pfizer Pharmaceuticals
New York, New York 10017

WORMS BLITZED

A single dose of Antiminth (1 cc. per 10 lbs. of body weight, 1 tsp./50 lbs.—maximum dose, 4 tsp.=20 cc.) offers highly effective control of *both* pinworms and roundworms.

Antiminth has been shown to be extremely well tolerated by children and adults alike in clinical studies.* Pleasantly caramel-flavored, it is non-staining to teeth and oral mucosa on ingestion... doesn't stain stools, linen or clothing.

One prescription can economically treat the entire family.

ROERIG Pfizer
A division of Pfizer Pharmaceuticals
New York, New York 10017

NSN 6505-00-148-6967

Pinworms, roundworms controlled with a single, non-staining dose of

ANTIMINTH®

(pyrantel pamoate)

equivalent to 50 mg. pyrantel/ml.

ORAL SUSPENSION

*Data on file at Roerig

Please see prescribing information on facing page

OBITUARIES—(Continued from Page xiv)

sisters, Miss Fannie Dyer of Petersburg and Mrs. Anna Heavener, Franklin; and two brothers, William R. and James N. Dyer, both of Fort Seybert.

* * *

THELMA V. OWEN, M. D.

The Journal recently received word of the death of Dr. Thelma V. Owen of Proctorville, Ohio on May 16, 1975, at her home there. She was 75.

Doctor Owen was the founder of the Owen Clinic Institute, Inc. in Huntington. A native of Martins Ferry, Ohio, she founded the non-profit psychiatric clinic in 1945. She was Director until 1956, when she became Chief of Staff and Administrator, serving in that capacity until her retirement in 1969.

Doctor Owen attended West Virginia University and the Women's Medical College of Pennsylvania, receiving her M. D. degree in 1924 from the University of Maryland School of Medicine. Before going to Huntington, she had a private practice in Detroit, and served with various hospitals and institutes in Maryland and Connecticut. She also was on the staff of the Federal Reformatory for Women at Alderson.

Doctor Owen was an honorary member of the Cabell County Medical Society, the West Virginia State Medical Association and the American Medical Association. A Diplomate of the National Board of Medical Examiners, she also was a member of the American Psychiatric Association, the American Association for the Advancement of Science, the Academy of Psychosomatic Medicine, and the National Academy of Religion and Mental Health.

Surviving are a daughter, Mrs. Dale Tabor of Huntersville, North Carolina, and a brother, Harold Owen of Canton, Ohio.

* * *

G. RALPH MAXWELL, M. D.

Editor's Note: See editorial on Page 40.

Dr. G. Ralph Maxwell, retired Morgantown physician who specialized in chest diseases, died on December 29 at his home there. He was 77. Doctor Maxwell retired last July 1 after more than 50 years of practice in Morgantown.

Doctor Maxwell was a Clinical Associate Professor of Medicine at the West Virginia University School of Medicine from 1926 to 1969.

In 1926, he began a series of chest clinics in Morgantown and Fairmont. He continued the Fairmont clinic for more than 30 years, passing on the Morgantown clinic to Dr. Joseph J. Renn III at his retirement.

His close association with the Monongalia County Tuberculosis and Respiratory Disease Association led to several awards, among which were the 1972 William L. Cooke Award, for which he was the first recipient, and an honorarium dinner in 1974.

He was a Fellow of the American College of Physicians and the American College of Chest

The Eye and Ear Clinic of Charleston, Inc.

(A Thirty-five Bed Proprietary Hospital)

CHARLESTON, WEST VIRGINIA 25301
Phone: 1-(304)-343-4371

OPHTHALMOLOGY

Edwin M. Shepherd, M.D.
Diplomate, American Board of Ophthalmology

Milton J. Lilly, Jr. M.D.
Diplomate, American Board of Ophthalmology

Robert E. O'Connor, M.D.
Diplomate, American Board of Ophthalmology

Moseley H. Winkler, M.D.
Diplomate, American Board of Ophthalmology

Retinal Surgery
Fluorescein Angiography
Argon Laser Photocoagulation
Contact Lenses
Strontium 90 Beta Irradiation

OTOLOGY

William C Morgan, Jr., M.D.
Diplomate, American Board of Otolaryngology

OTOLARYNGOLOGY

Romeo Y. Lim, M.D.
Diplomate, American Board of Otolaryngology

Micro-surgery
Maxillo-facial Surgery
Reconstructive Surgery
Head & Neck Surgery
Cryosurgery
Endoscopy
Oncology

OPHTHALMOLOGY and OTOLARYNGOLOGY

John B. Haley, M.D.
John A. B. Holt, M.D.
Diplomate, American Board of Ophthalmology

Ancillary Services

Orthoptics
Visual Fields—Flow Studies
Laboratory
X-ray
Audiometry

Audiology

Nancy McClung, M.S.

Anesthesia

Catherine Kenney, CRNA
Inez Maggio, CRNA
Muriel Dodds, CRNA

Physicians, and a founder of the Council of Research, American College of Chest Physicians.

Doctor Maxwell joined the Monongalia County and State tuberculosis associations in 1925 and served two terms as President of the West Virginia Tuberculosis Association. He was a member of its board for many years. He was a First Vice President of the Monongalia County Tuberculosis Association for several years, and served two terms as President of the West Virginia Thoracic Society.

Doctor Maxwell served on the committee which established the West Virginia Tuberculosis and Health Association Chair of Pulmonary Diseases at WVU's School of Medicine.

Born in Denver, Colorado, Doctor Maxwell was graduated from West Virginia University and received his M. D. degree in 1923 from the University of Cincinnati College of Medicine. He entered private practice in Morgantown in 1926 after taking his internship at Grant Memorial Hospital in Columbus, Ohio. He did postgraduate work at Harvard Medical School in 1929.

Doctor Maxwell was a past Secretary of the Monongalia County Medical Society and a former member of the Council of the State Medical Association. He was a member of the Monongalia County Medical Society, the West Virginia State Medical Asssociation, the American Medical Association and the Southern Medical Association.

He was a veteran of World War I.

Survivors include the widow; a daughter, Mrs. Mary Kennedy of Morgantown; a son, George R. Maxwell of Oswego, New York; and two brothers, Dr. Cyrus Maxwell of Bethesda, Maryland and Paul Maxwell of Menlo Park, California.

* * *

NARCISO CHAN, M. D.

Dr. Narciso Chan of St. Albans died on January 8 in a South Charleston hospital. He was 49. Doctor Chan was a pathologist for Thomas Memorial Hospital in South Charleston.

A native of Solana, the Philippines, Doctor Chan was graduated from the University of Santo Tomas in Manila, receiving his M. D. degree in 1953 from that institution's Faculty of Medicine and Surgery.

Doctor Chan interned at Sacred Heart Hospital in Spokane, Washington, and served his residency at Cabell-Huntington Hospital in Huntington. He was a member of the Kanawha Medical Society, the West Virginia State Medical Association, the American Medical Association and the American Board of Pathologists.

Survivors include the widow; two daughters, Melanie and Linda Chan, both at home; two sons, Christopher and Laurence Chan, both at home; a brother, Ignacio Chan of the Philippines; and three sisters, Mrs. Segunda Manapas of New York, and Mrs. Mercedes Woo and Anna Chan, both of the Philippines.

BURDICK'S EK/5A CARDIOGRAPH — NOW WITH NEW PATIENT ISOLATION

—and unique automatic lead marking

Engineering advancements that made the Burdick EK/5 highly respected by the medical profession have been retained in the new EK/5A that also gives you new patient isolation (extremely low leakage current for maximum patient safety) and automatic lead marking activated by the lead selector switch.

Important refinements have also been added: long-life gold contacts on circuit boards, fewer and smaller circuit boards, high safety margins on components.

But safety and service-free operation are not the whole story! Burdick gives you operating convenience, diagnostic accuracy, reliable performance — all in a smartly styled 17-lb. instrument.

•

Write us today for a demonstration in your office.

General Medical WEST VIRGINIA

2400 — FOURTH AVE.

HUNTINGTON, WEST VIRGINIA

County Societies

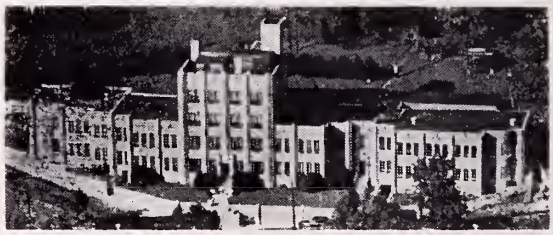
MERCER

The Mercer County Medical Society held its Christmas banquet at the Fincastle Country Club in Princeton on December 17.

Dr. T. Keith Edwards of Bluefield was installed as President along with Dr. Roy R. Raub of Princeton and Dr. David F. Bell, Jr. of Bluefield as Vice President and Secretary-Treasurer, respectively.

Dr. Frank J. Holroyd of Princeton, who was honored for his untiring efforts on behalf of organized medicine, was presented a plaque and oil painting by Dr. Harry S. Weeks, Jr. of Wheeling, a guest for the occasion. Other guests, including Dr. Worthy W. McKinney of Beckley and Dr. Stephen D. Ward of Wheeling, also expressed their thanks to Doctor Holroyd.

Among the other guests were Mr. and Mrs. Robert Holroyd of Princeton; Charles R. Lewis of Charleston, Executive Secretary of the State Medical Association; Doctor Ward's son, John, and Mrs. McKinney.—John J. Mahood, M. D., Secretary.



Radiology:
Karl J. Myers, Sr., M. D.

Pathalogy:
Fulvia Franyutti, M. D.

Surgery:
Hu C. Myers, M. D.
A. Kyle Bush, M. D.
T. H. Chang, M. D.
J. W. Woodford, M. D.
A. Richard Weaver, M. D.

Gynecology and Obstetrics:
Raymond W. Cranlund, M. D.

Internal Medicine:
E. G. Guy, M. D.
B. G. Thimmappa, M. D.
Karl J. Myers, Jr., M. D.
Amitava Ghasal, M. D.

Pediatrics:
E. G. Kreider, M. D.
J. M. Nissley, M. D.

Dentistry:
Glenn B. Paling, D. D. S.

Family Practice:
Alan S. Peterson, M. D.

THE MYERS CLINIC
Philippi, West Virginia

BLUEFIELD SANITARIUM CLINIC
525 BLAND STREET
BLUEFIELD, W. VA.

SURGERY
General:
HAMPTON ST. CLAIR, M. D.
EDWARD J. FLYNN, M. D.
R. A. RANA, M. D.

Thoracic and Cardiovascular:
R. W. NEILSON, JR., M. D.
JAMES P. THOMAS, M. D.

Neurosurgery:
WM. F. HILLIER, M. D.
E. L. GAGE, JR., M. D.

Urology:
STEVE J. MISAK, M. D.

Eye, Ear, Nose & Throat:
F. D. WHITE, M. D.

PEDIATRICS
GRADY McRAE, M. D.
E. M. SPENCER, M. D.

OBSTETRICS & GYNECOLOGY
E. W. McCAULEY, M. D.
CHARLES S. FLYNN, M. D.
T. KEITH EDWARDS, M. D.

INTERNAL MEDICINE
J. R. SHANKLIN, M. D.
KARL E. WEIER, M. D.
H. F. WARDEN, JR., M. D.
C. D. PRUETT, M. D.
R. O. ROGERS, JR., M. D.

NUCLEAR MEDICINE
C. D. PRUETT, M. D.
R. O. ROGERS, M. D.

PATHOLOGY
DAVID F. BELL, JR., M. D.
JOHN J. BRYAN, M. D.

ROENTGENOLOGY
GEORGE C. KING, M. D.
JOHN A. ANZIULEWICZ, M. D.

ANESTHESIOLOGY
DAVID H. GATHERUM, M. D.

EMERGENCY SERVICE
S. K. CHOPRA, M. D.
R. P. BHASIN, M. D.

BUSINESS MANAGER
JAMES L. FOSTER

MARCH
1976

Vol. 72 No. 3

The WEST VIRGINIA Medical Journal

Official Organ of the West Virginia State Medical Association

Box 1031 Charleston, W. Va. 25324

EDITOR
George F. Evans, M. D. (1981)
Clarksburg

MANAGING EDITOR AND BUSINESS MANAGER
Mr. Charles R. Lewis
Charleston

EXECUTIVE ASSISTANT
Mr. Custer B. Halliday
Charleston

ASSOCIATE EDITORS

E. J. Van Liere, M. D. (1976)
Morgantown

Stephen D. Ward, M. D. (1977)
Wheeling

John M. Hartman, M. D. (1978)
Charleston

Vernon E. Duckwall, M.D.(1979)
Elkins

Thomas J. Halbrook, M.D.(1980)
Huntington

Joe N. Jarrett, M. D. (1982)
Oak Hill

Published monthly by the West Virginia State Medical Association under the direction of the Publication Committee. Original articles are accepted on condition that they are contributed solely to The Journal.

Entered as second-class matter January 1, 1926, at the post office at Charleston, West Virginia, under the act of March 3, 1879.

Subscription Rates: $10 a year in the U.S.A.; $15 in foreign countries; $2 per single copy. Advertising rates furnished on request. Address all communications to Business Manager, The West Virginia Medical Journal, Box 1031, Charleston, West Virginia 25324. Phone 346-0551.

Microfilm editions beginning with the 1972 volume are available from University Microfilms, Inc., 300 N. Zeeb Road, Ann Arbor, Michigan 48106.

Member 1976

CONTENTS

Special Article

The Medical Examiner System: A New Concept in Community Medicine for the State of West Virginia—Irvin M. Sopher, M. D. 49

Scientific Articles

Acute Spinal Epidural Abscess—Charles R. Loar, M. D.; and Thomas R. Connelly, M. D. 56

Congenital Sarcoma of the Hand (A Case Report)—John P. Evans, M. D.; and Lawrance S. Miller, M. D. 58

Scientific Department

Medical Grand Rounds from the West Virginia University Medical Center (Aplastic Anemia: A Serious Complication of Viral Hepatitis)—Edited by Raymond B. Weiss, M. D. 61

The President's Page

Optometry — A New Medical Specialty? — Jack Leckie, M. D., President, W. Va. State Medical Association 64

Editorials

Corneal Arcus and Cardiovascular Disease 65
Medical Examiner Article 'Historical Essay' 66
Mortality Among Students, Young Physicians 66
Seminars To Explore Link With Humanities 67

General News

Two Speakers Named for Annual Meeting 68
Ninth Mid-Winter Clinical Conference 69
Aetna Suggests 'Do-Nots' for Physicians 70
Pseudoaneurysms One of ACP-ASIM Topics 71
Third Annual 'Newborn Day' 72
Continuing Education Activities 73
Doctor Bateman on AMA Committee 73
ABFP Board Annual Meeting 74

Special Departments

WVU Medical Center News x
The Month in Washington xii
Obituaries xiv
County Societies xvi
Book Reviews xvii
Classified Section xxiii
Index to Advertisers xxiv

respond to one

According to her major symptoms, she is a psychoneurotic patient with severe anxiety. But according to the description she gives of her feelings, part of the problem may sound like depression. This is because her problem, although primarily one of excessive anxiety, is often accompanied by depressive symptomatology. Valium (diazepam) can provide relief for both—as the excessive anxiety is relieved, the depressive symptoms associated with it are also often relieved.

There are other advantages in using Valium for the management of psychoneurotic anxiety with secondary depressive symptoms: the psychotherapeutic effect of Valium is pronounced and rapid. This means that improvement is usually apparent in the patient within a few days rather than in a week or two, although it may take longer in some patients. In addition, Valium (diazepam) is generally well tolerated; as with most CNS-acting agents, caution patients against hazardous occupations requiring complete mental alertness.

Also, because the psychoneurotic patient's symptoms are often intensified at bedtime, Valium can offer an additional benefit. An *h.s.* dose added to the *b.i.d.* or *t.i.d.* treatment regimen can relieve the excessive anxiety and associated depressive symptoms and thus encourage a more restful night's sleep.

Valium® (diazepam) ⓘⓥ

2-mg, 5-mg, 10-mg scored tablets

in psychoneurotic anxiety states with associated depressive symptoms

surveillance because of their predisposition to habituation and dependence. In pregnancy, lactation or women of childbearing age, weigh potential benefit against possible hazard.

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

ROCHE

Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

"The quality of mercy..."

That's your concern.

The quality of protection. That's Ætna Life & Casualty's concern.

And that's why Ætna has created a library of video tapes for your education. Potential sources and causes of malpractice. Even suggestions as to how claims might be prevented. What's more, you can get credit hours for viewing them! Check the list below:

"DO NO HARM"

For physicians and hospitals. Involves the four most vulnerable areas in the hospital for malpractice claims. (Color)

"NURSES, RELATED PROFESSIONS, MALPRACTICE"

Primarily pertains to nurses responsibilities as well as problems they may encounter in their practice.

"CAUSES AND PREVENTION OF MEDICAL MALPRACTICE"

Comprehensive coverage of studies made in various specialty fields. Goes into many causes of malpractice and some suggestions on how malpractice may be avoided.

"ELECTRICAL HAZARDS IN HOSPITALS"

Gives physicians, nurses and technical personnel some basic knowledge of electrical equipment in a hospital and the dangers that electricity can cause there.

"COULD THIS BE YOU?"

Shows a physician violating all principles in the handling of a patient . . . and flashbacks to proper technique. (Color)

If any of these tapes are of interest to you or your local association, please contact:

Douglas Wall
Ætna Life & Casualty
516 Charleston National Plaza
Charleston, West Virginia 25301

Ætna
LIFE & CASUALTY

You get *action* with Ætna

WVU Medical Center
—News—

A former officer in the United States Medical Corps, who had extensive service both in Korea and this country, recently joined the faculty of the Department of Surgery, West Virginia University School of Medicine.

Edwin C. James, M. D., associate professor, was born in Lordsburg, New Mexico. He served as a combat medical aidman in Korea before enrolling at the University of Oregon, where he received both his B. A. and M. D. degrees.

Completing his postgraduate training in the Medical Corps, he served a rotating internship at Walter Reed General Hospital and residencies in general, thoracic and cardiovascular surgery at Ireland Army Hospital, Fort Knox; Madigan General Hospital in Tacoma, Washington, and at Letterman General Hospital at San Francisco's Presidio.

He has served as Chief of the Department of Surgery and consultant to the Eighth Army Surgeon for General and Thoracic Surgery at the 121st Evacuation Hospital in Seoul, Korea; and as Chief of the General Surgery Service at Valley Forge General Hospital in Phoenixville, Pennsylvania.

He came to WVU from Madigan Army Medical Center in Tacoma, Washington, where he was Chief of the Thoracic Surgery Service, staff general surgeon and Director of Intern Training.

• **Compiled from material furnished by Mrs. Mary Ellin Wylie, Director, Medical Center News and Information Services, Morgantown, W. Va.**

WVU Hospital Annual Report

West Virginia University Hospital has come a long way since it opened 15 years ago. Since the first patient was admitted August 10, 1960, one of every 10 residents of West Virginia has been treated at University Hospital.

On most days there are patients from 40 or more of the State's 55 counties, and West Virginians comprise 85 per cent of those admitted.

The hospital's annual report for the fiscal year that ended June 30 compares statistics for that period with the preceding year.

Meeting the needs of these patients are the hospital's 1,415 employees.

The report lists 14,310 admissions (up from 14,006) with the average length of stay down to 9 from 9.1 days. Also up were 103,154 outpatient visits as compared to 98,559 in the 1974 report.

Laboratory procedures, which topped the one million mark for the first time in 1974, rose to 1,114,534, and there were 37,009 emergency room visits.

Richard J. VanTuinen of Cincinnati (third from left) was among visiting lecturers from the Food and Drugs Administration's Division of Radioactive Materials and Nuclear Medicine for a training course in Nuclear Medicine Quality Assurance held recently at West Virginia University Medical Center. Designed for nuclear medicine technologists, the sessions were devoted primarily to scintillation cameras. With the visitor are staff members from the Department of Radiology, including (from left) Michael Yester, Ph. D., research instructor; James C. W. Lai, Ph. D., research assistant professor, In Vitro Laboratory; Sharad R. Amtey, Ph. D., Associate Professor and Director, Division of Radiation Physics; and Orlando F. Gabriele, M. D., Professor and Chairman and Chief, Division of Nuclear Medicine.

THE WHEELING CLINIC

EOFF AT 16th STREET

WHEELING, WEST VIRGINIA

General Surgery:
J. O. Rankin, M. D.
C. D. Hershey, M. D.
E. C. Vass, M. D.

Ophthalmology:
W. F. Park, M. D.
M. E. Nugent, M. D.
R. V. Pangilinan, M. D.

Ear, Nose & Throat:
W. A. Tiu, M. D.
A. G. Matadar, M. D.

Orthopedic Surgery:
E. L. Barrett, M. D.

Thoracic Surgery:
Daniel W. Dickinson, M. D.

Obstetrics and Gynecology:
Robert W. Leibald, M. D.
Robert T. Brandfass, M. D.
A. Athari, M. D.
J. W. Campbell, M. D.

Urology:
D. C. Trapp, M. D.

Dermatology:
K. W. Watersan, M. D.
Sheldan Widlan, M. D.

Internal Medicine:
Charles H. Hiles, M. D.
Albert M. Valentine, M. D.
T. E. Chvasta, M. D.
B. L. Van Pelt, M. D.
P. R. Hedges, M. D.
C. L. Beall, M. D.
C. A. Vasquez, M. D.

Psychiatry:
Stephen D. Ward, M. D.
David Hill, M. D.
David H. Smith, M. D.
Robert L. Mendelsan, Ed D.

Neurology:
Albert L. Wanner, M. D.
Henry L. Kettler, M. D.

Roentgenology:
A. K. Butler, M. D.
J. N. Aceta, M. D.

Speech Pathologist and Audiologist:
James P. Frum, M. S.

Clinical Laboratories:
Donna Burlenski
Donna Bryan

Physician Assistants:
Joann Green, P. A.
Michael G. Simon, P. A.

Technologists:
Electrocardiography:
Betty Maguire, R. N.
Brenda Muklewicz, R. N.
Electroencephalography:
Juanita Stone, R. N.
Roentgenology:
Evelyn Forester, R. T.

Administration:
Lester L. Cline, Manager
Henry L. Castilow, Asst. Mgr.

General and Thoracic Surgery
Stephen T. J. Lee, M. D.
James A. Gardner, M. D.

Orthopedics
Clifford A. Stevenson, M. D.
S. A. Zahir, M. D.
Maria C. Ramos, M. D.
George Orphanos, M. D.

Obstetrics-Gynecology
A. Ray Jacobson, M. D.
Mariamma Abraham, M. D.

Ophthalmology
Edward T. Liu, M. D.

Urology
S. L. Francis, M. D.

Stanaford Road, P. O. Box 50
Beckley, West Virginia 25801
Phone (304) 252-7331

Internal Medicine
Prestan C. Davis, M. D.
Joseph A. Maiolo, M. D.
Eugene Warvariv, M. D.
R. James Yates, M. D.
S. L. Bembalkar, M. D.

Pediatrics
P. B. Gaga, M. D.
Raquel S. Israel, M. D.

Radiology
Thomas L. Martin, M. D.

Clinic Manager
James P. Bland

The Month in Washington

• From the Washington Office of the American Medical Association.

PRESIDENT FORD's all-out attack against rising government spending sustained a major blow with the Congressional override of his veto of a $45 billion health, welfare and labor bill.

The vetoed bill called for $1 billion more than the Administration's budget request and required hiring of 8,000 more Health, Education, Welfare Department employees. Almost $800 million of the increase involves health programs which would receive a total of $3.9 billion for the fiscal year that ends September 30.

Both houses of Congress exceeded the two-thirds vote necessary to override a veto. The tally was 310 to 113 in the House; 70 to 24 in the Senate.

The Administration defeat came despite a last-minute Administration offer to compromise by more or less splitting the difference for a $500 million increase.

Ford had said in his veto message the bill was "a classic example of unchecked spending." But Democrats charged the money measure would cut spending below last year's level and not meet inflation-caused increases.

The bill provides more funds for such programs as community health services, maternal and child health, medical research, alcoholism and drug abuse facilities, emergency medical services, and education of health professionals.

The Congressional vote was preceded by all-out efforts on both sides to line up votes and by vigorous lobbying from affected outside groups.

The HEW money bill is considered the hardest to vote against in Congress because of the multitude of popular programs funded. Asked how the House was able to muster such a vote to override, including dissident Republicans, House Majority Leader Thomas O'Neill, Jr., (D-Mass.) replied simply, "the coming election."

House Majority Whip, Rep. Robert Michel (R-Ill.), told the House in the debate that it would be "setting the spending tone for the session."

AMA Officials Meet With Ford

Officials of the American Medical Association have met with President Ford and his top health officers to discuss a wide range of health topics including the Administration's new health proposals and Federal regulation problems worrying the physicians of the country.

The 45-minute meeting in the Cabinet Room at the White House was described by participants as friendly. "The President listened with interest to what we had to say and his attitude seemed to be sympathetic," said AMA President, Max H. Parrott, M. D.

Doctor Parrott said President Ford noted the pressures he is facing to take positions that might disturb some physicians. The Chief Executive made a point of urging the AMA and members of his Administration and White House staff to confer often to resolve differences.

Among the subjects discussed were the President's State of the Union and Budget Health Proposals, government regulations affecting physicians, the Federal Trade Commission move to allow physicians to advertise, costs of medical care, and medical manpower.

Present for the AMA, in addition to Doctor Parrott, were Raymond T. Holden, M. D., Chairman of the AMA Board of Trustees; Richard E. Palmer, M. D., AMA President-Elect; James H. Sammons, M. D., Executive Vice President of the AMA; and Joe Miller, Deputy Assistant Executive Vice President.

President Ford was told that his recommended annual four per cent limit on physician reimbursement increases under Medicare poses real problems with the medical profession, which must adjust to higher costs of doing business yearly as well as the climbing costs of professional liability insurance.

Ford indicated he understood the viewpoint of the profession on the matter and proposed that Administration officials and AMA representatives meet further on the issue.

The AMA delegation told Ford about the AMA's National Commission on the Cost of Medical Care and invited the President to appoint a representative of his Administration to serve as a member.

There was considerable talk about the supply of physicians, with President Ford evincing special interest in the foreign medical graduate situation and the problems of Americans studying medicine abroad. The AMA officials described the increasing numbers of young physicians entering primary care.

The AMA's support of the National Health Service Corps as a principal means of helping physician-short areas was outlined. The voluntary incentives in this program were compared with the "indentured service" aspects of health manpower legislation before Congress.

GROUP INSURANCE

Officially sponsored by

WEST VIRGINIA STATE MEDICAL ASSOCIATION

SOUND PROTECTION

at a

SUBSTANTIAL SAVING IN COST

Please Send Me Descriptive Brochure On—

☐ **LONG TERM DISABILITY INCOME PROTECTION**
(Pays you a regulor monthly benefit up to $2,000 per month when you are disabled)

☐ **$15,000 MAJOR HOSPITAL PLAN**
Covers you ond your fomily up ta $15,000 per person

☐ **LOW-COST LIFE INSURANCE**
In units of — $10,000 - $20,000 - $30,000 - $40,000 - $50,000

☐ **$100,000 ACCIDENTAL DEATH & DISMEMBERMENT INSURANCE**
Araund the clock protection — 24 haurs o day . . . 365 doys a year . . . world wide

☐ **OFFICE OVERHEAD DISABILITY POLICY**
(Pays your office expense up to $3,500 per mo. while you are disabled)

☐ **A MUTUAL FUND PROGRAM**
Designed to quolify under HR-10

☐ **A MILLION DOLLAR CATASTROPHE LIABILITY POLICY**
(Covers: Malpractice—Home—Personal—Auto Liobility)

Name _____ Address _____

MAIL TO: ADMINISTRATOR
McDONOUGH-CAPERTON-SHEPHERD-GOLDSMITH
P. O. BOX 1551 CHARLESTON, W. VA. (25326)

NOTE: A full time service representative travels the State and is always available for personal consultation. Your Resident Administrator provides complete service here in the State including processing and payment of claims.

Obituaries

RAYMOND H. LEWELLYN, M. D.

Dr. Raymond H. Lewellyn of Wheeling died on December 27, 1975, in Cleveland, Ohio. He was 74. A native of Washington County, in Pennsylvania, Doctor Lewellyn was graduated from West Virginia University and received his M. D. degree in 1925 from New York University School of Medicine. He interned at Ohio Valley General Hospital in Wheeling.

Doctor Lewellyn was an honorary member of the Ohio County Medical Society, the West Virginia State Medical Association and the American Medical Association.

Survivors include the widow; and a daughter, Mrs. Barbara Cleveland of Cleveland, Ohio.

* * *

ELDON B. TUCKER, SR., M. D.

Dr. Eldon B. Tucker, Sr., of Morgantown, an original sponsor of the State Transportation Remuneration Incentive Program (TRIP) for senior citizens, died on February 9 in a hospital there. He was 81. A former family physician who later specialized in anesthesiology, Doctor Tucker had served as Chairman of the State Medical Association's Committee on Aging since 1969.

Doctor Tucker was one of the founders of the Clinical Laboratory at Monongalia General Hospital and was its director for 10 years. He was a lecturer on anesthesia at the West Virginia University School of Medicine for more than 20 years.

He began the practice of medicine in Morgantown in 1922 and was company physician for two coal companies for a number of years. After the opening of Monongalia General Hospital in Morgantown he devoted full time to the practice of anesthesiology. He was Chief Anesthesiologist at that hospital and another Morgantown hospital for many years.

Doctor Tucker had been Director of the Morgantown Hospital Service, Inc., since its inception in 1939, President since 1944; and had been President of the Morgantown Medical-Surgical Service, Inc., since its establishment in 1943.

A native of Cassville, in Monongalia County, Doctor Tucker was graduated from West Virginia University and received his M. D. degree in 1921 from the University of Cincinnati College of Medicine. He interned at Chester (Pa.) Hospital.

During World War II, Doctor Tucker was Chief of the Emergency Medical Service in Monongalia County. He had been Chief of Staff of two Morgantown hospitals, and a Past President of the Monongalia County Medical Society.

Doctor Tucker retired from the practice of anesthesiology in 1959. A Past President of the Southern

(Continued on Page xvi)

BRIEF SUMMARY OF
PRESCRIBING INFORMATION
ANTIMINTH ® (pyrantel pamoate)
ORAL SUSPENSION

Actions. Antiminth (pyrantel pamoate) has demonstrated anthelmintic activity against *Enterobius vermicularis* (pinworm) and *Ascaris lumbricoides* (roundworm). The anthelmintic action is probably due to the neuromuscular blocking property of the drug.

Antiminth is partially absorbed after an oral dose. Plasma levels of unchanged drug are low. Peak levels (0.05-0.13μg/ml) are reached in 1-3 hours. Quantities greater than 50% of administered drug are excreted in feces as the unchanged form, whereas only 7% or less of the dose is found in urine as the unchanged form of the drug and its metabolites.

Indications. For the treatment of ascariasis (roundworm infection) and enterobiasis (pinworm infection).

Warnings. *Usage in Pregnancy:* Reproduction studies have been performed in animals and there was no evidence of propensity for harm to the fetus. The relevance to the human is not known.

There is no experience in pregnant women who have received this drug.

The drug has not been extensively studied in children under two years; therefore, in the treatment of children under the age of two years, the relative benefit/risk should be considered.

Precautions. Minor transient elevations of SGOT have occurred in a small percentage of patients. Therefore, this drug should be used with caution in patients with preexisting liver dysfunction.

Adverse Reactions. The most frequently encountered adverse reactions are related to the gastrointestinal system.

Gastrointestinal and hepatic reactions: anorexia, nausea, vomiting, gastralgia, abdominal cramps, diarrhea and tenesmus, transient elevation of SGOT.

CNS reactions: headache, dizziness, drowsiness, and insomnia. Skin reactions: rashes.

Dosage and Administration. *Children and Adults:* Antiminth Oral Suspension (50 mg of pyrantel base/ml) should be administered in a single dose of 11 mg of pyrantel base per kg of body weight (or 5 mg/lb.); maximum total dose 1 gram. This corresponds to a simplified dosage regimen of 1 ml of Antiminth per 10 lb. of body weight. (One teaspoonful=5 ml.)

Antiminth (pyrantel pamoate) Oral Suspension may be administered without regard to ingestion of food or time of day, and purging is not necessary prior to, during, or after therapy. It may be taken with milk or fruit juices.

How Supplied. Antiminth Oral Suspension is available as a pleasant tasting caramel-flavored suspension which contains the equivalent of 50 mg pyrantel base per ml, supplied in 60 ml bottles and Unitcups™ of 5 ml in packages of 12.

ROERIG Pfizer
A division of Pfizer Pharmaceuticals
New York, New York 10017

One swallow does it

eliminates Pinworms and Roundworms with a single dose

- **Single dose effectiveness against both pinworms and roundworms**— The only single-dose anthelmintic effective against pinworms *and* roundworms.
- **Nonstaining**—to oral mucosa, stomach contents, stools, clothing or linen.
- **Well tolerated**—the most frequently encountered adverse reactions are related to the gastrointestinal tract.
- **Economical**—a single prescription will treat the whole family.
- **Highly acceptable**—pleasant-tasting caramel flavor.
- **Convenient**—just 1 tsp. for every 50 lbs. of body weight. May be taken without regard to meals or time of day.

ROERIG Pfizer
A division of Pfizer Pharmaceuticals
New York, New York 10017

Please see prescribing information on facing page. NSN 6505-00-148-6967

Antiminth® ORAL SUSPENSION
(pyrantel pamoate) equivalent to 50mg pyrantel/ml

County Societies

CABELL

The Cabell County Medical Society met in a combined meeting with the Cabell County Bar Association and the Cabell County Dental Society on January 8 at the French Tavern in Huntington. The guest speaker was Dr. Irvin M. Sopher, Chief Medical Examiner for the State of West Virginia.

The Society unanimously passed a resolution praising Drs. James A. Heckman and William S. Sheils for their service on the Board of Trustees of the Cabell-Huntington Hospital.

Dr. Gerald E. Vanston, the Society President during 1975, introduced the new President for 1976, Dr. Charles H. McKown, Jr.—Colin M. Craythorne, M. D., Secretary.

* * *

MERCER

The Mercer County Medical Society met on January 19 in Bluefield at the University Club. Dr. C. C. (Jack) Coleman, Jr., presented numerous cases on radical surgery and plastic results from malignancies of the head and neck. Dr. T. Keith Edwards, President, announced committee appointments. Dr. John J. Mahood reported on the January meeting of the Council of the State Medical Association. He also urged the membership to contribute to WESPAC.—David F. Bell, Jr., M. D., Secretary-Treasurer.

* * *

McDOWELL

The McDowell County Medical Society met on January 14 in Welch at Doctor's Memorial Hospital. Committee members were appointed by the President, Dr. Joseph C. Ray. County, State and AMA dues for 1976 were explained to the membership. A letter from Dr. Irvin M. Sopher, Chief Medical Examiner for the State of West Virginia, regarding the selection of physician county medical examiners, was discussed.—Arthur A. Carr, M. D., Secretary.

OBITUARIES

(Continued from Page xiv)

Association of Anesthesiologists, he was an honorary member of the Monongalia County Medical Society, the West Virginia State Medical Association and the American Medical Association.

Survivors include two sons, John W. Tucker of Charleston, South Carolina, and Dr. Eldon B. Tucker, Jr., an anesthesiologist in Salt Lake City, Utah; a daughter, Mary Louise Corrick of St. Petersburg, Florida; a sister, Mary E. Tucker of Morgantown; and two brothers, J. Wyland and Earle C. Tucker, both of Morgantown.

OFFICERS OF COMPONENT SOCIETIES

Society	President		Secretory		Meetings
Boone	Manuel T. Uy	Madison	Harold H. Howell	Madison	3rd Wed.
Brooke	Rogelio L. Velarde	Follansbee	James E. Wise	Follansbee	
Cabell	Robert L. Dunworth	Huntington	Colin M. Craythorne	Huntington	2nd Thurs.
Central West Virginia	Charles T. Lively	Weston	Joseph B. Reed	Buckhannon	As Sched.
Eastern Panhandle	Norman Samuels	Martinsburg	Wm. O. Pischnotte	Martinsburg	2nd Wed.
Fayette	Carl R. Adkins	Fayetteville	Chuan H. Lee	Montgomery	1st Wed.
Greenbrier Valley	Harold P. Dinsmore	Ronceverte	Romeo R. Ednacot	Ronceverte	2nd Wed.
Hancock	George S. Kasar	Weirton	Carlos L. Vasquez	Weirton	3rd Tues.
Harrison	Charles S. Harrison	Clarksburg	W. E. Williamson, Jr.	Clarksburg	1st Thurs.
Kanawha	Joseph T. Skaggs	Charleston	Jean P. Cavender	Charleston	2nd Tues.
Logan	Enrico V. Rollos	Man	Leandro Galang	Logan	2nd Wed.
Marion	Lawrence A. Williams	Fairmont	Q. A. Melgareja	Fairmont	Last Tues.
Marshall	Andrew J. Barger	Glen Dale	Michail Dolgovskij	Glen Dale	1st Tues.
Mason	Mark Cheng	Pt. Pleasant	Ismael O. Jamora	Pt. Pleasant	4th Tues.
McDowell	Joseph C. Ray	Welch	Arthur Allen Carr	Welch	2nd Wed.
Mercer	T. Keith Edwards	Bluefield	David F. Bell, Jr.	Bluefield	3rd Mon.
Mingo	Edward B. Headley	Williamson	Duane A. Schram	Williamson	2nd Wed.
Monongalia	R. J. Nottingham	Morgantown	Barbara Jones	Morgantown	1st Tues.
Ohio	Donald H. Hofreuter	Wheeling	Francis J. Gaydosh	Wheeling	4th Tues.
Parkersburg Academy	George Gevas	Parkersburg	Alfonso Morales	Parkersburg	1st Thurs.
Potomac Valley	Robert E. Roberts	Petersburg	D. F. Bensenhaver	Petersburg	2nd Wed.
Preston	James V. Gainer, Jr.	Kingwood	C. Y. Moser	Kingwood	4th Thurs.
Raleigh	Stephen T. J. Lee	Beckley	Kwan H. Lee	Beckley	3rd Thurs.
Summers	Buford W. McNeer	Hinton	E. L. Jimenez	Hinton	3rd Mon.
Tygart's Valley	Gene W. Harlow	Grafton	A. Kyle Bush	Philippi	3rd Thurs.
Wetzel	Lemoyne Coffield	New Martinsville	Chas. P. Watson	New Martinsville	Monthly
Wyoming	Frank J. Zsoldos	Mullens	George F. Fordham	Mullens	Quarterly

Book Review

TEXTBOOK OF BASIC EMERGENCY MEDICINE—Edited by Robert H. Miller, in collaboration with James R. Cantrell. The C. V. Mosby Company, St. Louis, Mo. October, 1975. 233 Pages. Price $6.95.

The use of emergency medical technicians and the more highly trained emergency paramedics to deliver advanced life support has produced a decline in mortality and morbidity for the acutely ill or injured. This textbook was developed primarily for the education of the emergency paramedic. There have been several good textbooks developed for the emergency medical technician. Previous educational training material for emergency paramedics has been designed for coronary care nurses or has been limited to acute coronary care.

This textbook is designed to approach the basic clinical problems in emergency medicine. It emphasizes the pathophysiology of disease processes as the basis for efficient and rational initial emergency management. It has an excellent, short review of all phases of emergency medicine while covering acute coronary care. It also includes the new standards for cardiopulmonary resuscitation (CPR) and emergency cardiac care (ECC) as initially presented in JAMA (227:835-849, 1974).

I think every paramedic ought to have a copy of this book for reference and review. The contents also should be of value to anyone (medical student, critical care nurse, emergency departmental personnel, or physicians) who wishes to study or review basic emergency medicine in an excellent, concise form.—Willard F. Daniels, Jr., M. D.

Mushroom Conference Scheduled For August In Colorado

The Third Annual Aspen Mushroom Conference will be held at the Hotel Jerome in Aspen, Colorado, August 8-13, 1976. The conference is designed for physicians, amateur mycologists and scientists interested in the identification and toxic properties of mushrooms; and is sponsored by the Colorado Mountain College at Glenwood Springs and the Beth Israel Hospital, Denver.

The senior faculty member will be Dr. Alexander H. Smith, author of a *Field Guide to Western Mushrooms*, and Professor of Botany at the University of Michigan. Dr. Rolf Singer, Professor of Botany, Field Museum, Chicago; and author of *Agaricales in Modern Toxonomy*, will serve as distinguished visiting professor.

Courses on advances in the diagnosis and treatment of mushroom poisoning and on hallucinogenic mushrooms, including taxonomic, chemical and psychological aspects, will be offered. For further information, contact: Aspen Mushroom Conference, 1818 Gaylord Street, Denver, Colorado 80206.

Burdick Ultrasound

ENGINEERED TO MEET ALL PRESENT AND PROPOSED SPECIFICATIONS FOR ELECTRICAL CURRENT LEAKAGE TO INSURE MAXIMUM PATIENT SAFETY

DESIGNED FOR OPERATOR CONVENIENCE WITH MAXIMUM THERAPEUTIC RESULTS

New specifications established by UL and the NFPA for hospital safety standards specify maximum ultrasound therapy apparatus current-leakage levels not to exceed 50 microamperes.

Burdick's UT/4300A Ultrasound/Stimulator (FCC Approval No. U-329) and UT/420A Ultrasound (FCC Approval No. U-248) units under worst possible conditions will not exceed those specifications—thanks to Burdick engineering.

Your choice of console or portable models permits versatile therapy procedures to meet patient needs.

BURDICK

General Medical WEST VIRGINIA

2400 — FOURTH AVE.

HUNTINGTON, WEST VIRGINIA

The Eye and Ear Clinic of Charleston, Inc.

(A Thirty-five Bed Proprietary Hospital)

CHARLESTON, WEST VIRGINIA 25301
Phone: 1-(304)-343-4371

OPHTHALMOLOGY

Edwin M. Shepherd, M.D.
Diplomate, American Board of Ophthalmology

Milton J. Lilly, Jr. M.D.
Diplomate, American Board of Ophthalmology

Robert E. O'Connor, M.D.
Diplomate, American Board of Ophthalmology

Moseley H. Winkler, M.D.
Diplomate, American Board of Ophthalmology

Retinal Surgery
Fluorescein Angiography
Argon Laser Photocoagulation
Contact Lenses
Strontium 90 Beta Irradiation

OTOLOGY

William C Morgan, Jr., M.D.
Diplomate, American Board of Otolaryngology

OTOLARYNGOLOGY

Romeo Y. Lim, M.D.
Diplomate, American Board of Otolaryngology
Micro-surgery
Maxillo-facial Surgery
Reconstructive Surgery
Head & Neck Surgery
Cryosurgery
Endoscopy
Oncology

OPHTHALMOLOGY and OTOLARYNGOLOGY

John B. Haley, M.D.
John A. B. Holt, M.D.
Diplomate, American Board of Ophthalmology

Ancillary Services

Orthoptics
Visual Fields—Flow Studies
Laboratory
X-ray
Audiometry

Audiology

Nancy McClung, M.S.

Anesthesia

Catherine Kenney, CRNA
Inez Maggio, CRNA
Muriel Dodds, CRNA

BLUEFIELD SANITARIUM CLINIC

525 BLAND STREET
BLUEFIELD, W. VA.

SURGERY

General:
HAMPTON ST. CLAIR, M. D.
EDWARD J. FLYNN, M. D.
R. A. RANA, M. D.

Thoracic and Cardiovascular:
R. W. NEILSON, JR., M. D.
JAMES P. THOMAS, M. D.

Neurosurgery:
WM. F. HILLIER, M. D.
E. L. GAGE, JR., M. D.

Urology:
STEVE J. MISAK, M. D.

Eye, Ear, Nose & Throat:
F. D. WHITE, M. D.

PEDIATRICS
GRADY McRAE, M. D.
E. M. SPENCER, M. D.

OBSTETRICS & GYNECOLOGY
E. W. McCAULEY, M. D.
CHARLES S. FLYNN, M. D.
T. KEITH EDWARDS, M. D.

INTERNAL MEDICINE
J. R. SHANKLIN, M. D.
KARL E. WEIER, M. D.
H. F. WARDEN, JR., M. D.
C. D. PRUETT, M. D.
R. O. ROGERS, JR., M. D.

NUCLEAR MEDICINE
C. D. PRUETT, M. D.
R. O. ROGERS, M. D.

PATHOLOGY
DAVID F. BELL, JR., M. D.
JOHN J. BRYAN, M. D.

ROENTGENOLOGY
GEORGE C. KING, M. D.
JOHN A. ANZIULEWICZ, M. D.

ANESTHESIOLOGY
DAVID H. GATHERUM, M. D.

EMERGENCY SERVICE
S. K. CHOPRA, M. D.
R. P. BHASIN, M. D.

BUSINESS MANAGER
JAMES L. FOSTER

APRIL
1976

Vol. 72 No. 4

The WEST VIRGINIA Medical Journal

Official Organ of the West Virginia State Medical Association

Box 1031 Charleston, W. Va. 25324

EDITOR
George F. Evans, M. D. (1981)
Clarksburg

MANAGING EDITOR AND BUSINESS MANAGER
Mr. Charles R. Lewis
Charleston

EXECUTIVE ASSISTANT
Mr. Custer B. Hallidoy
Charleston

ASSOCIATE EDITORS

E. J. Van Liere, M. D. (1976)
Morgantown

Stephen D. Ward, M. D. (1977)
Wheeling

Jahn M. Hartman, M. D. (1978)
Charlestan

Vernan E. Duckwall, M.D.(1979)
Elkins

Thomas J. Holbrook, M.D.(1980)
Huntington

Joe N. Jorrett, M. D. (1982)
Oak Hill

Published monthly by the West Virginia State Medical Association under the direction of the Publication Committee. Original articles are accepted on condition that they are contributed solely to The Journal.

Entered as second-class matter January 1, 1926, at the post office at Charleston, West Virginia, under the act of March 3, 1879.

Subscription Rates: $10 a year in the U.S.A.; $15 in foreign countries; $2 per single copy. Advertising rates furnished on request. Address all communications to Business Manager, The West Virginia Medical Journal, Box 1031, Charleston, West Virginia 25324. Phone 346-0551.

Microfilm editions beginning with the 1972 volume are available from University Microfilms, Inc., 300 N. Zeeb Road, Ann Arbor, Michigan 48106.

Member 1976

CONTENTS

Scientific Articles

Aorta-Coronary Bypass Surgery—Dilip K. Basu, M. D.; James H. Walker, M. D.; and Mitsuru Nakatsuka, M. D. 75

Pregnancy in Diabetic Women: Review of Five Years' Experience at the Sacramento Medical Center—Narinder N. Sehgal, M. D. 81

Disposition of High School Athletic Injuries—K. Douglas Bowers, Jr., M. D. 88

The President's Page

Communicate To Legislate—Jack Leckie, M. D., President, W. Va. State Medical Association 90

Editorials

Some Sober Reflections 91

Amniocentesis Appears Safe and Accurate 92

Great Expectations For Family Practice 92

General News

Additional Speakers for Annual Meeting 94

Continuing Education Activities 96

Pulmonary Medicine Seminar 96

State AAFP Scientific Assembly 97

Marshall Medical School Staff Additions 98

Aetna Suggestions To Safeguard Interests 98

Doctor Esposito Honored 99

Pathologists Plan WVU Programs 99

State Auxiliary Spring Conference 100

Special Departments

WVU Medical Center News x

The Month in Washington xii

Obituaries xiv

County Societies xvii

Book Review xix

Classified Section xxiii

Index to Advertisers xxiv

respond to one

According to her major symptoms, she is a psychoneurotic patient with severe anxiety. But according to the description she gives of her feelings, part of the problem may sound like depression. This is because her problem, although primarily one of excessive anxiety, is often accompanied by depressive symptomatology. Valium (diazepam) can provide relief for both—as the excessive anxiety is relieved, the depressive symptoms associated with it are also often relieved.

There are other advantages in using Valium for the management of psychoneurotic anxiety with secondary depressive symptoms: the psychotherapeutic effect of Valium is pronounced and rapid. This means that improvement is usually apparent in the patient within a few days rather than in a week or two, although it may take longer in some patients. In addition, Valium (diazepam) is generally well tolerated; as with most CNS-acting agents, caution patients against hazardous occupations requiring complete mental alertness.

Also, because the psychoneurotic patient's symptoms are often intensified at bedtime, Valium can offer an additional benefit. An *h.s.* dose added to the *b.i.d.* or *t.i.d.* treatment regimen can relieve the excessive anxiety and associated depressive symptoms and thus encourage a more restful night's sleep.

Valium® (diazepam) IV

2-mg, 5-mg, 10-mg scored tablets

in psychoneurotic anxiety states with associated depressive symptoms

surveillance because of their predisposition to habituation and dependence. In pregnancy, lactation or women of childbearing age, weigh potential benefit against possible hazard.

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

ROCHE

Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

HELP.

It's what you do. It's what you are. It's what you, as a physician, strive to give every patient. In every way.

Sometimes, a patient's needs require specialized help. When the need arises, Tidewater Psychiatric Institute stands ready to augment your care.

At TPI, help takes many forms, through a comprehensive program of patient-oriented diagnostic, consultative and psychiatric treatment services within a therapeutic setting. Individually designed treatment programs meet the particular needs of both adult and adolescent patients. Our hospital's school allows adolescents to continue their education while at TPI. A special program exists for the detoxification and rehabilitation of the individual with alcohol or drug-related problems.

You are invited to investigate personally, by telephone or through

correspondence, the avenues of specialized help available to your patient at our facilities in Norfolk and Virginia Beach.

tpi TIDEWATER PSYCHIATRIC INSTITUTE

1701 Will-O-Wisp Dr., Va. Beach, Va. 23454
CALL COLLECT (804) 481-1211
1005 Hampton Blvd., Norfolk, Va. 23507
CALL COLLECT (804) 622-2341

Accredited by The Joint Commission on the Accreditation of Hospitals.
Approved for Blue Cross, Champus, Medicare and other health coverage.

WVU Medical Center
—News—

• Compiled from material furnished by Mrs. Mary Ellin Wylie, Director, Medical Center News and Information Services, Morgantown, W. Va.

Two faculty members have been appointed in the Department of Obstetrics and Gynecology, West Virginia University School of Medicine.

Named Associate Professor is David J. S. Hunter, a graduate of St. Andrews University in Great Britain and a member of the Royal College of Obstetricians and Gynecologists.

Doctor Hunter has served as Senior Registrar and Lecturer with the Nuffield Department of Obstetrics and Gynecology at the University of Oxford and, in 1966-67, was a research Fellow in reproductive physiology at the Worcester Foundation in Shrewsbury, Massachusetts.

His research interests are in the fields of carbohydrate metabolism in pregnancy and in gynecological endocrinology.

A graduate of Istanbul University Medical School in Turkey is Josh Tunca, Assistant Professor. Doctor Tunca served a rotating internship in Wilmington, North Carolina, and completed a four-year residency program in obstetrics and gynecology at Bowman-Gray School of Medicine in Winston-Salem, North Carolina. He has also completed a two-year Fellowship in gynecological oncology at the Emory University School of Medicine in Atlanta.

His recent work includes extensive experience in detection of gynecologic malignancies, including colposcopy, as well as all aspects of gynecologic cancer surgery and chemotherapy.

Anesthesiology Appointments

Two associate and three assistant professors have been appointed to the Department of Anesthesiology.

Juan F. Gutierrez, Associate Professor, is a graduate of the WVU School of Medicine and served his internship at University Hospital. After completing his residency at Children's Hospital in Birmingham, Alabama, he was in private practice in that city and served two years as Chief Anesthesiologist and Director of Respiratory Therapy while an officer at the Naval Submarine Medical Center in Groton, Connecticut.

For the past two years, he has been Associate Physician for Emergency Care at the Westerly (R. I.) Hospital.

Orestes A. Martinez, Associate Professor, rejoins the faculty after spending the past three years as Head of Anesthesia for Cardiac Surgery at the University of Michigan. He served at WVU from 1970 to 72 as Assistant Professor of Anesthesiology.

He received his M. D. degree from the San Fernando Faculty of Medicine in Lima, Peru, and served an internship in the Arzobispo Loayzo Hospital of that city, and in Highland Park (Mich.) Hospital. His residency training was received at affiliated hospitals of Wayne State University in Detroit.

Anthony Entress, Assistant Professor, is a native of Great Britain and received his medical education and specialty training in anesthesiology.

His experience has included extensive work in anesthesia for cardio-thoracic surgery, particularly in open heart surgery, and in neurosurgical anesthesia. His publications include "Continuous Positive Airway Pressure in Infants," and "Survival after Massive Pulmonary Hemmorhage in Respiratory Syndrome."

Also a native of Great Britain is Michael Britchford Howie, Assistant Professor.

Born in Rudley Hallows, England, he was educated at Trinity College in Dublin, Ireland. He received his specialty training at Dublin hospitals and was Registrar for the Department of Anaesthetics at St. Vincent's Hospital in that city.

He was named a Fellow of the Faculty of Anaesthetists, Royal College of Surgeons, Ireland, in May of last year.

John J. Rick, Assistant Professor, was born in Chicago. He received his A. B. degree from DePauw University in Greencastle, Indiana; and his M. D. degree from the University of Michigan.

He received his residency training in internal medicine at Henry Ford Hospital of Detroit and at the University of Michigan Hospital in Ann Arbor; and was a Critical Care Medicine Fellow at the University of Pittsburgh.

Doctor Rick's special field of interest is critical care, both in intensive care and coronary care units.

Attends Swedish Conference

Harry Papadopoulos, who received his master's degree from WVU last May, was invited by the Swedish Academy of Pharmaceutical Sciences to participate in an International Symposium on Bioactivation and Controlled Drug Release in Stockholm this month.

The invitation was in recognition of his research conducted under N. H. Choulis, WVU Professor of Pharmacy. The studies concerned the formulation of long-acting methadone tablets to treat addiction.

THE WHEELING CLINIC

EOFF AT 16th STREET

WHEELING, WEST VIRGINIA

General Surgery:
J. O. Rankin, M. D.
C. D. Hershey, M. D.
E. C. Voss, M. D.

Ophtholmalogy:
W. F. Park, M. D.
M. E. Nugent, M. D.
R. V. Pangilinan, M. D.

Ear, Nase & Thraat:
W. A. Tiu, M. D.
A. G. Matadar, M. D.

Orthopedic Surgery:
E. L. Barrett, M. D.

Tharacic Surgery:
Daniel W. Dickinson, M. D.

Obstetrics and Gynecology:
Robert W. Leibold, M. D.
Robert T. Brandfass, M. D.
A. Athari, M. D.
J. W. Campbell, M. D.

Urology:
D. C. Trapp, M. D.

Dermatology:
K. W. Waterson, M. D.
Sheldon Widlan, M. D.

Internal Medicine:
Charles H. Hiles, M. D.
Albert M. Valentine, M. D.
T. E. Chvasta, M. D.
B. L. Van Pelt, M. D.
P. R. Hedges, M. D.
C. L. Beall, M. D.
C. A. Vasquez, M. D.

Psychiotry:
Stephen D. Word, M. D.
David Hill, M. D.
David H. Smith, M. D.
Robert L. Mendelson, Ed D.

Neurology:
Albert L. Wanner, M. D.
Henry L. Kettler, M. D.

Raentgenology:
A. K. Butler, M. D.
J. N. Aceto, M. D.

Speech Patholagist and Audialagist:
James P. Frum, M. S.

Clinical Laboratories:
Donna Burlenski
Donna Bryan

Physician Assistants:
Joann Green, P. A.
Michael G. Simon, P. A.

Technolagists:
Electrocardiography:
Betty Maguire, R. N.
Brenda Muklewicz, R. N.
Electroencephalography:
Juanita Stone, R. N.
Roentgenology:
Evelyn Forester, R. T.

Administrotian:
Lester L. Cline, Manager
Henry L. Castilow, Asst. Mgr.

General and Thoracic Surgery
Stephen T. J. Lee, M. D.
James A. Gardner, M. D.

Orthopedics
Clifford A. Stevenson, M. D.
S. A. Zahir, M. D.
Mario C. Ramas, M. D.
George Orphanos, M. D.

Obstetrics-Gynecology
A. Ray Jacobson, M. D.
Mariamma Abraham, M. D.

Ophthalmology
Edward T. Liu, M. D.

Urology
S. L. Francis, M. D.

Internal Medicine
Preston C. Davis, M. D.
Joseph A. Maiolo, M. D.
Eugene Worvariv, M. D.
R. James Yates, M. D.
S. L. Bembolkar, M. D.

Pediatrics
P. B. Gogo, M. D.
Raquel S. Israel, M. D.

Radiology
Thomas L. Martin, M. D.

Clinic Manager
James P. Bland

Southern West Virginia Clinic

Stanaford Road, P. O. Box 50
Beckley, West Virginia 25801
Phone (304) 252-7331

The Month in Washington

• From the Washington Office of the American Medical Association.

Opposition to the Administration's proposals to change Medicare appears to be almost universal on Capitol Hill. The American Medical Association, the American Hospital Association, the AFL-CIO, and the National Council of Senior Citizens are among many frequently crossed organizations that have joined in assailing the President's proposal.

The Administration has asked Congress to approve a new catastrophic benefit for Medicare coupled with much higher cost-sharing, to impose precentage "caps" on Medicare reimbursement for hospitals and physicians, and to change Medicare into a block grant program for the states.

The House Ways and Means Health Subcommittee, headed by Rep. Dan Rostenkowski (D-Ill.), chaired three days of hearings as the Ford proposal was intended to take effect in March and Congressional approval was necessary. Any illusions the Administration may have entertained that some important support might surface for the Medicare plan were swiftly dispelled by the parade of hostile witnesses.

Rostenkowski chided the Administration for seeking early enactment without being able to provide Congress with a legislative proposal by the time hearings started. From the tone of Rostenkowski and other Subcommittee members in their questioning, there seems little chance of the proposal getting anywhere.

Raymond T. Holden, M.D., Chairman of the AMA's Board of Trustees, said "The proposed changes would not only be impractical, but would also be inherently unfair to all parties concerned. Unfortunately, the unfairness would be especially hard upon the beneficiaries of the Medicare program."

Discussing the proposed four per cent limitation in 1977 on increases in Medicare physician reimbursement, Doctor Holden said, "We must point out unequivocally that the percentages proposed are wholly unrealistic. The proposal ignores the realities occurring in our economy throughout the country. Moreover, inflationary conditions existing generally in our economy cannot justifiably be the basis for imposition of arbitrary and discriminatory ceilings on a single segment of the economy.

"To impose such arbitrary limits on only one segment of the economy and then to expect a continuation of beneficiary satisfaction for having benefits paid by Medicare (as promised by the program) is naive. The health care sector of our society cannot operate in a vacuum. It is subject to the same costs of living and costs of doing business as is any other segment of society. It cannot be expected to provide high quality care while having reimbursement limited to unrealistic levels."

The AMA Chariman told the Subcommittee the proposed limitations on increases in charges are in reality a response to a problem created in large measure by government itself. "Providers and physicians cannot be subject to ever increasing regulations and requirements. . . . and yet be expected to keep charges at less than cost levels. These special requirements are on top of the inflationary problems faced by them along with everyone else."

Doctor Holden noted that both physicians and hospitals also "are experiencing highly unusual expenses relative to professional liability insurance."

'Could Face Bankruptcy'

"If the limitations were imposed, some health facilities could face bankruptcy," Doctor Holden said. "The patient will pay more, and the Federal government will again have promised a broad program while seeking to limit payment for the care received. Under the guise of holding down costs to the Federal government, the costs would, in fact, be increased to patients. The Federal government must realize that once a program is legislated the service does not become free."

The proposals creating the four and seven per cent (on hospitals) limitations "are clearly discriminatory and arbitrary," he said. "They should be rejected summarily. Physicians have already been subjected to unreasonable and arbitrary controls. First the 83rd percentile formula, then the various phases under price controls, and now the 75th percentile which itself is controlled by an arbitrary economic index.

"These inequities are further magnified by the unrealistic Medicare practice which bases current payments upon data almost two years old. While physicians have accepted their responsibility in meeting the needs of the elderly, it is time for the government to meet its responsibility of fulfilling the commitment it made to the elderly under Medicare."

GROUP INSURANCE

Officially sponsored by

WEST VIRGINIA STATE MEDICAL ASSOCIATION

SOUND PROTECTION

at a

SUBSTANTIAL SAVING IN COST

Please Send Me Descriptive Brochure On—

☐ **LONG TERM DISABILITY INCOME PROTECTION**
(Pays you a regular monthly benefit up to $2,000 per month when you are disabled)

☐ **$15,000 MAJOR HOSPITAL PLAN**
Covers you and your family up to $15,000 per person

☐ **LOW-COST LIFE INSURANCE**
In units of — $10,000 - $20,000 - $30,000 - $40,000 - $50,000

☐ **$100,000 ACCIDENTAL DEATH & DISMEMBERMENT INSURANCE**
Around the clock protection — 24 hours o doy . . . 365 days a year . . . world wide

☐ **OFFICE OVERHEAD DISABILITY POLICY**
(Pays your office expense up to $3,500 per mo. while you are disabled)

☐ **A MUTUAL FUND PROGRAM**
Designed to qualify under HR-10

☐ **A MILLION DOLLAR CATASTROPHE LIABILITY POLICY**
(Covers: Malpractice—Home—Personal—Auto Liability)

Nome _____ Address _____

MAIL TO: ADMINISTRATOR
McDONOUGH-CAPERTON-SHEPHERD-GOLDSMITH
P. O. BOX 1551 CHARLESTON, W. VA. (25326)

NOTE: A full time service representative travels the State and is always available for personal consultation. Your Resident Administrator provides complete service here in the State including processing and payment of claims.

Obituaries

CHARLES B. CHAPMAN, M. D.

Dr. Charles B. Chapman, Welch internist, died on February 8 at his winter home in Mesa, Arizona. He was 75.

A native of Sycamore, Illinois, Doctor Chapman was graduated from the University of Minnesota and received his M. D. degree in 1926 from that institution's Medical School. He served his internship at Minneapolis General Hospital and held a fellowship in internal medicine at the Mayo Clinic from 1928 to 1932, when he went to Welch.

He was associated with Grace Hospital in Welch for 40 years. During this time he served as President, Chief of Staff, and Chief of the Medical Department.

A former President of the McDowell County Medical Society, Doctor Chapman was a member, in addition to that Society, of the West Virginia State Medical Association, the American Medical Association, the Society of Internal Medicine and the American College of Physicians.

Survivors include the widow; three daughters, Mrs. Norman Rubash of Surrey, England; Mrs. Patrick Sullivan, Greeley, Colorado, and Mrs. Roger Dalton, Ashland, Kentucky; and one son, Dr. Marshall Chapman of San Diego, California.

* * *

GROVER C. ROBERTSON, M. D.

Dr. Grover C. Robertson of St. Albans died on February 15 in a Charleston hospital. He was 90.

A native of Kittle, in Roane County, he began teaching school at the age of 16. He received his M. D. degree in 1907 from the Kentucky School of Medicine in Louisville and established family practice in Clendenin the following year.

In 1914, Doctor Robertson went to Charleston, where he combined his practice with an active interest in politics. He served as Superintendent of Spencer State Hospital and Director of the State Unemployment Commission.

He was elected Chairman of the Kanawha County Democratic Executive Committee for four terms, and served two terms as Chairman of the Charleston City Executive Committee. In 1923, he was an unsuccessful candidate for Mayor of Charleston.

Doctor Robertson had served on the Kanawha County Lunacy Commission and the State Board of Control. A veteran of World War I, he was a member of the Kanawha Medical Society, the West

(Continued on Page xvi)

BRIEF SUMMARY OF
PRESCRIBING INFORMATION
ANTIMINTH® (pyrantel pamoate)
ORAL SUSPENSION

Actions. Antiminth (pyrantel pamoate) has demonstrated anthelmintic activity against *Enterobius vermicularis* (pinworm) and *Ascaris lumbricoides* (roundworm). The anthelmintic action is probably due to the neuromuscular blocking property of the drug.

Antiminth is partially absorbed after an oral dose. Plasma levels of unchanged drug are low. Peak levels (0.05-0.13μg/ml) are reached in 1-3 hours. Quantities greater than 50% of administered drug are excreted in feces as the unchanged form, whereas only 7% or less of the dose is found in urine as the unchanged form of the drug and its metabolites.

Indications. For the treatment of ascariasis (roundworm infection) and enterobiasis (pinworm infection).

Warnings. *Usage in Pregnancy:* Reproduction studies have been performed in animals and there was no evidence of propensity for harm to the fetus. The relevance to the human is not known.

There is no experience in pregnant women who have received this drug.

The drug has not been extensively studied in children under two years; therefore, in the treatment of children under the age of two years, the relative benefit/risk should be considered.

Precautions. Minor transient elevations of SGOT have occurred in a small percentage of patients. Therefore, this drug should be used with caution in patients with preexisting liver dysfunction.

Adverse Reactions. The most frequently encountered adverse reactions are related to the gastrointestinal system.

Gastrointestinal and hepatic reactions: anorexia, nausea, vomiting, gastralgia, abdominal cramps, diarrhea and tenesmus, transient elevation of SGOT.

CNS reactions: headache, dizziness, drowsiness, and insomnia. Skin reactions: rashes.

Dosage and Administration. *Children and Adults:* Antiminth Oral Suspension (50 mg of pyrantel base/ml) should be administered in a single dose of 11 mg of pyrantel base per kg of body weight (or 5 mg/lb.); maximum total dose 1 gram. This corresponds to a simplified dosage regimen of 1 ml of Antiminth per 10 lb. of body weight. (One teaspoonful=5 ml.)

Antiminth (pyrantel pamoate) Oral Suspension may be administered without regard to ingestion of food or time of day, and purging is not necessary prior to, during, or after therapy. It may be taken with milk or fruit juices.

How Supplied. Antiminth Oral Suspension is available as a pleasant tasting caramel-flavored suspension which contains the equivalent of 50 mg pyrantel base per ml, supplied in 60 ml bottles and Unitcups™ of 5 ml in packages of 12.

ROERIG Pfizer
A division of Pfizer Pharmaceuticals
New York, New York 10017

One swallow does it

eliminates Pinworms and Roundworms with a single dose

- **Single dose effectiveness against both pinworms and roundworms**— The only single-dose anthelmintic effective against pinworms *and* roundworms.
- **Nonstaining**— to oral mucosa, stomach contents, stools, clothing or linen.
- **Well tolerated** — the most frequently encountered adverse reactions are related to the gastrointestinal tract.
- **Economical** — a single prescription will treat the whole family.
- **Highly acceptable** — pleasant-tasting caramel flavor.
- **Convenient** — just 1 tsp. for every 50 lbs. of body weight. May be taken without regard to meals or time of day.

ROERIG Pfizer
A division of Pfizer Pharmaceuticals
New York, New York 10017

Please see prescribing information on facing page. NSN 6505-00-148-6967

Antiminth® ORAL SUSPENSION
(pyrantel pamoate) equivalent to 50mg pyrantel/ml

(Continued from Page xiv)

Virginia State Medical Association, the American Medical Association and the American Psychiatric Association.

Surviving is a brother, Edgar G. Robertson of Elkview, in Kanawha County.

* * *

EVERETT ROY COOPER, M. D.

Dr. Everett Roy Cooper of Troy, in Gilmer County, died on February 21 at his home. He was 97. Doctor Cooper had practiced at Weston, Spencer and Gallipolis (Ohio) State hospitals, and in Nicholas and Gilmer counties. He was a Fellow of the American Psychiatric Association.

A former school teacher, Doctor Cooper attended Glenville State College and graduated from the former two-year West Virginia University School of Medicine, receiving his M. D. degree in 1912 from the College of Physicians and Surgeons of Baltimore.

A former President of the Central West Virginia Medical Society, he also was a past Health Officer and Mayor of Troy.

Doctor Cooper was an honorary member of the Central West Virginia Medical Society, the West Virginia State Medical Association and the American Medical Association; and was a member of the Southern Medical Association.

Surviving are a son, Everett Reese Cooper of Troy; and a daughter, Mrs. Mary Lee Massey of Sand Fork, in Gilmer County.

* * *

DAN GLASSMAN, M. D.

Dr. Dan Glassman, Point Pleasant family physician, died on February 20 in a Gallipolis, Ohio, hospital. He was 65.

A native of Morgantown, Doctor Glassman was graduated from West Virginia University and received his M. D. degree in 1935 from Rush Medical College in Chicago. He served his internship at St. Mary's Hospital in Grand Rapids, Michigan, and his residency at St. Francis Hospital in Charleston. He practiced in Charleston and was a former member of the Kanawha Medical Society before moving to Point Pleasant in 1947. He was a veteran of World War II.

Doctor Glassman was a member of the Mason County Medical Society, the West Virginia State Medical Association and the American Medical Association.

Survivors include the widow; a daughter, Miss Annajean Glassman, at home; three brothers, Ralph and Ivan Glassman of Erie, Pennsylvania, and Irvin Glassman of Miami, Florida; and the stepmother, Mrs. Mary Glassman of Erie.

RAYMOND A. TOMASSENE, M. D.

Dr. Raymond A. Tomassene of Wheeling, a retired specialist in the eye, ear, nose and throat, died on February 21 in a hospital there. He was 84.

Doctor Tomassene formerly was attending surgeon to the eye, ear, nose and throat staff of the Ohio Valley Hospital in Wheeling and Wheeling Hospital. He also had been a surgeon for the Baltimore and Ohio Railroad.

A native of Cincinnati, he was graduated from the University of Cincinnati and received his M. D. degree in 1916 from Jefferson Medical College of Philadelphia. He interned at the Post Graduate Hospital in New York City and, after serving with the U. S. Army Medical Corps in France during World War I, took additional graduate work in Philadelphia, New York, Vienna and France.

Doctor Tomassene was a Diplomate of the American Board of Ophthalmology, a Fellow of the American College of Surgeons and the American Academy of Ophthalmology and Otolaryngology; and a member of the French Ophthalmological Society.

He established practice in Wheeling in 1921. He was an honorary member of the Ohio County Medical Society, the West Virginia State Medical Association and the American Medical Association.

Surviving are one son, Raymond S. Tomassene, at home; and one sister, Mrs. Alice Magee of Wayne, Pennsylvania.

Pa. Allergy Assn. Schedules Spring Meeting In June

The Pennsylvania Allergy Association will hold its annual Spring Meeting at the Hershey Hotel in Hershey, Pennsylvania from Thursday, June 17, through Sunday, June 20.

The Continuing Education Department of the Milton Hershey Medical Center of Pennsylvania State University will co-sponsor, with the Pennsylvania Allergy Association, a symposium on Airways, Aerosols and Asthma on Thursday, June 17. Thomas Petty, M. D., Professor of Medicine at the University of Colorado School of Medicine, will be the principal speaker. Joseph J. Trautlein, M. D., Associate Professor of Medicine, Hershey Medical Center, is the Chairman of the symposium and the following Pennsylvania Allergy Association meeting. The symposium will be held at the Milton Hershey Medical Center.

During the following three days, the meeting will be held at the Hershey Hotel. Topics include "Allergic Ear, Nose and Throat Problems," "New Pharmacologic Agents for the Treatment of Allergic Disease," and "Allergic Dermatologic Problems." The faculty will include Charles Bluestone, M. D., Professor of Otolaryngology, University of Pittsburgh (Children's Hospital of Pittsburgh); Heinz J. Wittig, M. D., Associate Professor, College of Medicine, University of Florida, Gainesville; and Thomas Provost, M. D., State University at Buffalo, New York.

County Societies

CABELL

The Cabell County Medical Society met on February 12 at the Gateway Inn in Huntington. Dr. Charles H. McKown, Jr., the President, introduced Mr. Jack Jones, who discussed an on-going program at the Huntington YMCA for arthritic and cardiac patients.

The Society unanimously approved a resolution in opposition to legislation then before the State Legislature permitting optometrists to use drugs in the diagnostic and therapeutic treatment of the eyes.

The guest speaker was Dr. Robert W. Coon, Vice Chancellor for Health Education for the West Virginia Board of Regents, and Acting Dean of the Marshall University Medical School. Doctor Coon gave a very interesting talk on the current situation of the medical school, and then answered questions.—Colin M. Craythorne, M. D., Secretary.

* * *

MERCER

The Mercer County Medical Society met on February 16 in Princeton. Dr. Charles Hess from the University of Virginia presented an informative talk on plasma cell disorders.

A donation of $100 was sent to Kno-Koma.

Dr. Frank J. Holroyd of Princeton, Co-Chairman of the State Medical Association's Legislative Committee, summarized health-related legislation then before the State Legislature.—David F. Bell, Jr., M. D., Secretary.

* * *

McDOWELL

The McDowell County Medical Society met on February 11 at the Stevens Clinic Hospital in Welch. A period of silent tribute was observed for the late Dr. Charles B. Chapman of Welch.

The Society unanimously opposed the optometry bills then before the State Legislature, and instructed the Secretary to inform the legislators from this county of the Society's position.

The guest speaker for the evening was Mr. Bernard F. Becker III, the State Workmen's Compensation Commissioner, who gave an informative and interesting discussion of some of the problems and ramifications of Workmen's Compensation as it applies to his department and physicians.—Arthur A. Carr, M. D., Secretary.

* * *

MONONGALIA

The Monongalia County Medical Society met on January 6 at the Old Mill Club in Morgantown. The guest speaker was Professor Thomas C. Cady, of the West Virginia University School of Law, whose topic was "Medical Malpractice."

The Society again met on February 3 at the Old Mill Club. The speaker was Dr. Mabel M. Stevenson, Professor of Clinical Pathology and Director of the Blood Bank at the WVU Medical Center. Doctor Stevenson spoke on "Blood Banking—Recent Developments and New Regulations."

Dr. Robert J. Nottingham of Morgantown, a member of the State Medical Association's Council, reported on a meeting of the Council held on January 11.

The Society requested Dr. Ralph W. Ryan, Morgantown ophthalmologist, to send telegrams to leaders in the State Legislature stating the Society's opposition to legislation which would permit optometrists to use drugs in the eyes for therapeutic and diagnostic purposes.

A request was received from the American Medical Student Association President, Mr. Joseph C. Franz, for the financial assistance of the Society in sending a delegate, Mr. Thomas L. Warren, to the national convention of the student association. Mr. Warren is a resident of Monongalia County. The request was approved unanimously.—Barbara Jones, M. D., Secretary.

Anesthesia For Surgery American Discovery

A unique and highly important American contribution to medicine was the first use of ether as an anesthetic for surgery.

Prior to the 1840's, surgery and dentistry were grim affairs. There was no dependable means of relieving pain during the operation. A stiff drink of strong alcoholic beverage was the surgeon's major anesthetic, and this did not actually prevent pain. The surgeon had to learn to work very fast to get it over with before the patient succumbed to shock or loss of blood, while his patient was strapped to the operating table. Surgery was a last resort, to be avoided if at all possible.

A young Georgia physician, Crawford W. Long of Jefferson, was the first man to use ether for surgical anesthesia other than a dental procedure. On March 30, 1842, Doctor Long used ether to remove two small tumors from the neck of a friend. The operation was successful and the patient suffered no pain.

Other pioneering work was under way in New England, and a report appeared in a Boston journal in 1846. The published report was promptly attacked as "quackery" and a lively exchange in the medical literature ensued for a time until the value of ether as an anesthetic was proved to the satisfaction of the medical community of the day.

One of the New Englanders who did the first experiments with ether, Dr. W. T. G. Morton, gave up his dental practice to devote full time to anesthesia, and is most likely the first professional anesthetist in American medicine.

From America the news spread to Europe in 1846 and the European surgeons were quick to take up the use of ether.

109th ANNUAL MEETING

of the

West Virginia State Medical Association

The Greenbrier

AUGUST 18-21, 1976

PLAN NOW TO ATTEND

Book Review

GENERAL UROLOGY—Edited by Donald R. Smith, M. D. Eighth Edition. 492 Pages, Illustrated. Lange Medical Publications, Los Altos, California. 1975. Price $11.

The current publication is the eighth edition of this general urologic text, originated in 1957, printed in paperback, and involving 16 contributing authors in addition to the editor. The text is designed principally for medical students, but may also be found useful by urology residents and urologists. It also may be utilized as an excellent reference manual for the non-urologic physician and the family practitioner in particular.

Chapters are concise and carefully outlined. Diagrams and illustrations are substantial and descriptive. The index is adequate. Subtitles in each chapter are, in many instances, limited in scope. For those interested in further detail, however, an excellent bibliography is provided at the conclusion of each chapter. These bibliographies are thorough and are a distinct highlight of this text.

The publication is designed to provide an overview of a broad spectrum of urologic topics. The current edition contains major additions or revisions regarding recent advances in urologic ultrasonography, radioisotopic renography, and immunology of genitourinary malignancies. Sections on medical renal diseases, dialysis, and renal transplantation have also been revised and expanded. Basic genitourinary anatomy and embryology are discussed.

Genitourinary symptomatology, physical examination, laboratory evaluation, roentgenography, and instrumentation are reviewed. Specific topics are presented dealing with urinary infection, obstruction, vesico-ureteral reflux, venereal diseases, urinary calculi, trauma, tumors, and neurogenic bladder dysfunction.

The chapter on adrenal disorders has been extensively updated. Disorders of the lower urinary tract and external genitalia are logically categorized and are well outlined. Brief discussions are also presented regarding infertility, vasectomy, impotence, and psychosomatic aspects of genitourinary diseases. A section on abnormalities of sexual differentiation has been particularly well written.

This volume achieves its purpose of providing the reader with an appreciation of the wide spectrum of urologic disorders, as well as their diagnosis and management. It is ideal as a ready urologic information source with moderate subject detail; and provides adequate reference facility for the reader to pursue each topic in greater detail.—John A. Belis, M. D.

NOW! ALL NEW FROM CLAY-ADAMS-

ACCU-STAT Blood-Chemistry System

A new direct-reading filter photometer system, that can be fully calibrated, and features pre-measured disposable reagents.

An automatic and compact blood-chemistry system that produces accurate and reproducible blood-chemistry determinations simply and rapidly.

A blood-chemistry system that offers a complete systems approach to blood-chemistry determinations and permanent patient records.

A blood-chemistry analyzer that is perfect for 'stats' and whose micro capabilities make it ideal for pediatric, geriatric, burn and intensive care patients.

BENEFITS:

Convenience of micro technique
Option of venous or capillary blood
Completely calibratable instrument
Reagent package includes standards to assure accuracy and precision
Direct reading meter in constituent values
Test modules with 'built-in memory' saves recalibration steps
Simple test procedures easily learned by personnel
Instrument engineered for additional tests as they become available
Complete patient sample identification system
Permanent patient record system provided
Many different tests can be run interchangeably without recalibration of instrument
Solid state electronics
System capability includes the following tests:

☐ Hemoglobin ☐ True Glucose ☐ Cholesterol
☐ Bilirubin ☐ Urea Nitrogen (BUN) ☐ Uric Acid
☐ Total Protein ☐ Alkaline Phosphatase
☐ Albumin ☐ Creatinine ☐ Calcium
☐ SGOT (Transaminase)

Your present office assistant can do all the above tests without any special training.

All Reagent Kits contain all the needed equipment which is disposable after use.

Write us today for a demonstration in your office.

General Medical WEST VIRGINIA
2400 — FOURTH AVE.
HUNTINGTON, WEST VIRGINIA

The Eye and Ear Clinic of Charleston, Inc.

(A Thirty-five Bed Proprietary Hospital)

CHARLESTON, WEST VIRGINIA 25301
Phone: 1-(304)-343-4371

OPHTHALMOLOGY

Edwin M. Shepherd, M.D.
Diplomate, American Board of Ophthalmology

Milton J. Lilly, Jr. M.D.
Diplomate, American Board of Ophthalmology

Robert E. O'Connor, M.D.
Diplomate, American Board of Ophthalmology

Moseley H. Winkler, M.D.
Diplomate, American Board of Ophthalmology

Retinal Surgery
Fluorescein Angiography
Argon Laser Photocoagulation
Contact Lenses
Strontium 90 Beta Irradiation

OTOLOGY

William C Morgan, Jr., M.D.
Diplomate, American Board of Otolaryngology

OTOLARYNGOLOGY

Romeo Y. Lim, M.D.
Diplomate, American Board of Otolaryngology
Micro-surgery
Maxillo-facial Surgery
Reconstructive Surgery
Head & Neck Surgery
Cryosurgery
Endoscopy
Oncology

OPHTHALMOLOGY and OTOLARYNGOLOGY

John B. Haley, M.D.
John A. B. Holt, M.D.
Diplomate, American Board of Ophthalmology

Ancillary Services

Orthoptics
Visual Fields—Flow Studies
Laboratory
X-ray
Audiometry

Audiology

Nancy McClung, M.S.

Anesthesia

Catherine Kenney, CRNA
Inez Maggio, CRNA
Muriel Dodds, CRNA

BLUEFIELD SANITARIUM CLINIC

525 BLAND STREET
BLUEFIELD, W. VA.

SURGERY

General:
HAMPTON ST. CLAIR, M. D.
EDWARD J. FLYNN, M. D.
R. A. RANA, M. D.

Thoracic and Cardiovascular:
R. W. NEILSON, JR., M. D.
JAMES P. THOMAS, M. D.

Neurosurgery:
WM. F. HILLIER, M. D.
E. L. GAGE, JR., M. D.

Urology:
STEVE J. MISAK, M. D.

Eye, Ear, Nose & Throat:
F. D. WHITE, M. D.

PEDIATRICS
GRADY McRAE, M. D.
E. M. SPENCER, M. D.

OBSTETRICS & GYNECOLOGY
E. W. McCAULEY, M. D.
CHARLES S. FLYNN, M. D.
T. KEITH EDWARDS, M. D.

INTERNAL MEDICINE
J. R. SHANKLIN, M. D.
KARL E. WEIER, M. D.
H. F. WARDEN, JR., M. D.
C. D. PRUETT, M. D.
R. O. ROGERS, JR., M. D.

NUCLEAR MEDICINE
C. D. PRUETT, M. D.
R. O. ROGERS, M. D.

PATHOLOGY
DAVID F. BELL, JR., M. D.
JOHN J. BRYAN, M. D.

ROENTGENOLOGY
GEORGE C. KING, M. D.
JOHN A. ANZIULEWICZ, M. D.

ANESTHESIOLOGY
DAVID H. GATHERUM, M. D.

EMERGENCY SERVICE
S. K. CHOPRA, M. D.
R. P. BHASIN, M. D.

BUSINESS MANAGER
JAMES L. FOSTER

MAY
1976

Vol. 72 No. 5

The WEST VIRGINIA Medical Journal

Official Organ of the West Virginia State Medical Association

Box 1031 Charleston, W. Va. 25324

EDITOR
George F. Evans, M. D. (1981)
Clarksburg

MANAGING EDITOR AND BUSINESS MANAGER
Mr. Charles R. Lewis
Charleston

EXECUTIVE ASSISTANT
Mr. Custer B. Holliday
Charleston

ASSOCIATE EDITORS

E. J. Van Liere, M. D. (1976)
Morgantown

Stephen D. Ward, M. D. (1977)
Wheeling

John M. Hartman, M. D. (1978)
Charleston

Vernon E. Duckwall, M.D.(1979)
Elkins

Thomas J. Holbrook, M.D.(1980)
Huntington

Joe N. Jarrett, M. D. (1982)
Oak Hill

Published monthly by the West Virginia State Medical Association under the direction of the Publication Committee. Original articles are accepted on condition that they are contributed solely to The Journal.

Entered as second-class matter January 1, 1926, at the post office at Charleston, West Virginia, under the act of March 3, 1879.

Subscription Rates: $10 a year in the U.S.A.; $15 in foreign countries; $2 per single copy. Advertising rates furnished on request. Address all communications to Business Manager, The West Virginia Medical Journal, Box 1031, Charleston, West Virginia 25324. Phone 346-0551.

Microfilm editions beginning with the 1972 volume are available from University Microfilms, Inc., 300 N. Zeeb Road, Ann Arbor, Michigan 48106.

Member 1976

CONTENTS

Scientific Articles

Appendiceal Cystadenoma and the Acute Abdomen (A Case Report)—Leonard Prutsok, M. D.; Mansour Djadalizadeh, M. D.; Erlinda DeLaPena, M. D.; and Donald E. McDowell, M. D. 101

Recent Advances in Intracranial Aneurysm Surgery—John L. Fox, M. D.; and G. Robert Nugent, M. D. 104

Scientific Department

Medical Grand Rounds From The West Virginia University Medical Center (Medical Management of Rheumatoid Arthritis)—Edited by Raymond B. Weiss, M. D. 107

Special Article

The Health of General Robert E. Lee—Edward J. Van Liere, M. D., Ph. D. 113

The President's Page

Work, and More Work—Jack Leckie, M. D., President, W. Va. State Medical Association 118

Editorials

Let's Attack Concerns with Eye on Goals 119

The Health of General Robert E. Lee 120

Physicians Keep Lead in Public Confidence 120

General News

109th Annual Meeting 121

Hospital Medical Staff Conference 122

Doctor Flood Elected to National Post 122

Annual Meeting of Anesthesiologists 123

Coronary Program, Primary Care Physician 123

Third Annual Surgery Conference 124

Three More CME Programs Approved 125

Continuing Education Activities 126

Special Departments

WVU Medical Center News x

Third-Party News, Views, Program Concerns xii

Obituaries xvi

County Societies xix

Book Reviews xx

Classified Section xxiii

Index to Advertisers xxiv

respond to one

According to her major symptoms, she is a psychoneurotic patient with severe anxiety. But according to the description she gives of her feelings, part of the problem may sound like depression. This is because her problem, although primarily one of excessive anxiety, is often accompanied by depressive symptomatology. Valium (diazepam) can provide relief for both—as the excessive anxiety is relieved, the depressive symptoms associated with it are also often relieved.

There are other advantages in using Valium for the management of psychoneurotic anxiety with secondary depressive symptoms: the psychotherapeutic effect of Valium is pronounced and rapid. This means that improvement is usually apparent in the patient within a few days rather than in a week or two, although it may take longer in some patients. In addition, Valium (diazepam) is generally well tolerated; as with most CNS-acting agents, caution patients against hazardous occupations requiring complete mental alertness.

Also, because the psychoneurotic patient's symptoms are often intensified at bedtime, Valium can offer an additional benefit. An *h.s.* dose added to the *b.i.d.* or *t.i.d.* treatment regimen can relieve the excessive anxiety and associated depressive symptoms and thus encourage a more restful night's sleep.

Valium® (diazepam) Ⓘⓥ

2-mg, 5-mg, 10-mg scored tablets

in psychoneurotic anxiety states with associated depressive symptoms

surveillance because of their predisposition to habituation and dependence. In pregnancy, lactation or women of childbearing age, weigh potential benefit against possible hazard.

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

ROCHE

Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

No. 3
As potent as the pain it relieves.

e.g. the pain of
surgical convalescence

NOT TOO LITTLE

- as potent as the pain you need to relieve in patients with fractures, sprains, strains, wounds, contusions, and the pain of surgical convalescence
- unlike acetaminophen/codeine combinations, it does not sacrifice anti-inflammatory action

NOT TOO MUCH

- potent—yet not excessive
- addiction liability low

NOT TOO EXPENSIVE

- brand-name quality, yet reasonable in cost
- readily available in both hospital and local pharmacies

CIII CONVENIENCE

- telephone Rx in most states, up to 5 refills in 6 months at your discretion (where state law permits)

EMPIRIN® COMPOUND WITH CODEINE NO. 3

codeine phosphate* (32.4 mg) gr ½
Each tablet also contains: aspirin gr 3½, phenacetin gr 2½, caffeine gr ½. *Warning—may be habit-forming

Wellcome

Burroughs Wellcome Co.
Research Triangle Park
North Carolina 27709

WVU Medical Center
—News—

WEST Virginia University Medical Center is one of 20 centers in the United States and the only medical complex in a three-state area now using a combination of surgery and interstitial radioactive iodine in early stage prostatic cancer.

The treatment, used at the WVU center since last April, has shown early promise for curing lesions confined to the prostate gland. It has a number of advantages over radical prostatectomy or external radiation.

Surgery is being performed by Stanley Kandzari, M. D., under the direction of D. Franklin Milam, M. D., Chairman of the Division of Urology, Department of Surgery. Radioactive iodine "seed" implantation is performed by P. R. Reddi, M. D., Director of the Division of Radiation Therapy, Department of Radiology.

Doctor Kandzari, Associate Professor of Urology, said the treatment has been used on nine patients. Follow-up biopsies have been done on two of these—one at nine months and one at six months following implantation. Both biopsies were negative.

"Only about 10 per cent of the patients that we see with prostatic carcinoma have localized disease," Doctor Kandzari said. "At this time, there are no symptoms and the nodule is usually found during a rectal examination when the patient goes to his doctor for another complaint or for a routine physical checkup.

"When symptoms appear, usually the cancer has already extended outside the prostate gland and is no longer curable."

The patient referred by his doctor to University Hospital for treatment of a suspicious lesion first has a needle biopsy of the prostate gland to confirm or rule out a diagnosis of cancer.

If the biopsy is positive, he will then undergo extensive tests to determine the stage of the disease. His options for treatment (radical surgery, external radiation or combination therapy) are explained to him.

If his disease is localized and he elects combination therapy, he then undergoes surgery during which the pelvic lymph nodes are dissected and the radioactive seeds implanted into the prostate gland.

The Iodine-125 seeds measure 1.0 mm. by 2.5 mm. These tiny pellets are placed in the gland by means of hollow stainless steel needles inserted at varying positions and depths to space and guide the implantation. A special "gun" then fits over the needles and the seeds are discharged through them. The needles are then withdrawn and the incision closed.

• **Compiled from material furnished by Mrs. Mary Ellin Wylie, Director, Medical Center News and Information Services, Morgantown, W. Va.**

X-rays of the pelvis are then taken to determine the location of the seeds in the prostate for the purpose of radiation analysis by computer. Hospitalization for this procedure is about eight days. "About 20-30 seeds are implanted, according to the size of the prostate gland," said Doctor Reddi.

Doctor Reddi also explained that because of the low radiation intensity of the iodine, danger of radiation exposure to him and other personnel is minimal.

"Implantation of radioactive iodine is a one-time procedure," Doctor Reddi continued. "It has a low radiation intensity with a longer half-life, which is a distinct advantage for treating carcinoma of the prostate, which grows slowly. None of our nine cases has had any complications from this combination approach." This is not usually true with external radiation, he explained.

Doctor Reddi also pointed out that radioactive iodine can be implanted in one hospital admission whereas radiation treatments necessitate frequent outpatient visits over a seven-week period.

Drawing by WVU Medical Illustrator Roger Poston demonstrates how radioactive iodine pellets are implanted into the prostate gland in treatment for early-stage prostatic cancer. Therapy, used at the Medical Center since last April, combines surgery and internal radiation and shows much promise for curing localized malignant lesions.

THE WHEELING CLINIC

EOFF AT 16th STREET

WHEELING, WEST VIRGINIA

General Surgery:
J. O. Rankin, M. D.
C. D. Hershey, M. D.
E. C. Vass, M. D.

Ophthalmology:
W. F. Park, M. D.
M. E. Nugent, M. D.
R. V. Pangilinan, M. D.

Ear, Nose & Throat:
W. A. Tiu, M. D.
A. G. Matadar, M. D.
J. K. Tan, M. D.

Orthopedic Surgery:
E. L. Barrett, M. D.
R. S. Glass, M. D.

Thoracic Surgery:
Daniel W. Dickinson, M. D.

Obstetrics and Gynecology:
Robert W. Leibold, M. D.
Robert T. Brandfass, M. D.
A. Athari, M. D.
J. W. Campbell, M. D.

Urology:
D. C. Trapp, M. D.

Dermatology:
K. W. Watersan, M. D.
Sheldan Widlan, M. D.

Internal Medicine:
Charles H. Hiles, M. D.
Albert M. Valentine, M. D.
T. E. Chvasta, M. D.
B. L. Van Pelt, M. D.
P. R. Hedges, M. D.
C. L. Beall, M. D.
C. A. Vasquez, M. D.

Psychiatry:
Stephen D. Ward, M. D.
David Hill, M. D.
David H. Smith, M. D.

Neurology:
Albert L. Wanner, M. D.
Henry L. Kettler, M. D.

Roentgenology:
A. K. Butler, M. D.
J. N. Aceta, M. D.

Speech Pathologist and Audiologist:
James P. Frum, M. S.

Clinical Laboratories:
Donna Burlenski
Donna Bryan

Physician Assistants:
Joann Green, P. A.
Michael G. Siman, P. A.

Technologists:
Electrocardiography:
Betty Maguire, R. N.
Brenda Muklewicz, R. N.
Electroencephalography:
Juanita Stone, R. N.
Roentgenology:
Evelyn Forester, R. T.

Administration:
Lester L. Cline, Manager
Henry L. Castilaw, Asst. Mgr.

General and Thoracic Surgery
Stephen T. J. Lee, M. D.
James A. Gardner, M. D.

Orthopedics
Clifford A. Stevenson, M. D.
S. A. Zahir, M. D.
Maria C. Ramos, M. D.
George Orphanos, M. D.

Obstetrics-Gynecology
A. Ray Jacobson, M. D.
Mariamma Abraham, M. D.

Ophthalmology
Edward T. Liu, M. D.

Urology
S. L. Francis, M. D.

Southern West Virginia Clinic

Stanaford Road, P. O. Box 50
Beckley, West Virginia 25801
Phone (304) 252-7331

Internal Medicine
Preston C. Davis, M. D.
Joseph A. Maiala, M. D.
Eugene Warvariv, M. D.
R. James Yates, M. D.
S. L. Bembalkar, M. D.

Pediatrics
P. B. Gaga, M. D.
Raquel S. Israel, M. D.

Radiology
Thomas L. Martin, M. D.

Clinic Manager
James P. Bland

Third-Party News, Views and Program Concerns

• Prepared by state government agencies involved in health care, and other third-party organizations.

Physician's Role In Workmen's Compensation Claim Filing

Editor's Note: The following article, prepared by the West Virginia Workmen's Compensation Fund, is being published by *The Journal* as part of a continuing effort to help such agencies communicate to physicians information considered essential to the more efficient provision of services to West Virginians.

The procedure used for filing a Workmen's Compensation claim is relatively simple. Injured employees are required to notify their employer of the accident and obtain an "Application for Compensation" (WC-100) and "Physician's Report" (WC-200). It is the claimant's responsibility to complete the WC-100 and take the Physician's Report to his/her doctor for completion. The employer is responsible for completing the "Employer's Report" (WC-300).

It is important to note that the "Physician's Report" is the *key* to compensability determination. According to statute, a compensability ruling cannot be made until medical evidence provided on the Physician's Report and one other form (either the claimant's or employer's) has been received and reviewed. Therefore, it is of utmost importance that the Physician's Report is completed and returned to the Fund as quickly as possible. Failure to do so will delay the processing of a claim and any subsequent payment of benefits and medical bills. In order to expedite processing still further, physicians may wish to encourage claimants to complete the Application for Compensation while still in the office. In this way, the WC-100 and Physician's Report can be returned to the Fund at the same time.

Questions on the Physician's Report can be divided into three categories: (1) general information concerning the claimant, (2) general information concerning the physician (i.e., address, FEIN, etc.), and (3) specific information regarding the reported injury or disease. Only those question in the latter category must be completed by the physician; the claimant and office receptionist or insurance clerk should be encouraged to complete those in the first two categories in order to save time.

Unfortunately, the three questions most frequently left unanswered on this form are of major importance. Those three questions (Questions 18, 20 & 21)

(Continued on Page xiv)

13. TYPE OF INJURY OR DISEASE (Fatal, Fracture, Amputation, Occupational Disease, Occupational Pneumoconiosis, etc.)

14. SPECIFIC PART OF BODY INJURED/AFFECTED

15. DIAGNOSIS CODE (ICDA) (8th EDITION)
DESCRIPTION:

16. IS CONDITION THE RESULT OF OCCUPATIONAL INJURY OR DISEASE? YES ☐ NO ☐

17. DATE OF INJURY ___/___/___ Month Day Year

18. DATE DISABILITY BEGAN ___/___/___ Month Day Year

19. DATE OF FIRST TREATMENT ___/___/___ Month Day Year

20. ANTICIPATED PERIOD OF DISABILITY:

☐ Less than 4 days
☐ 1 Week
☐ 2 Weeks
☐ 3 Weeks
☐ 4 Weeks
☐ 6 Weeks
☐ 2 Months
☐ 3 to 6 Months
☐ More than 6 Months

21. DATE CLAIMANT WAS (WILL BE) ABLE TO RESUME WORK ___/___/___ Month Day Year

22. WILL CLAIMANT NEED PHYSICAL OR VOCATIONAL REHABILITATION? YES ☐ NO ☐

23. DOES THE CLAIMANT HAVE A CHRONIC DISEASE WHICH, IN YOUR OPINION, MAY RETARD RECOVERY FROM THIS INJURY?
YES ☐ NO ☐ IF YES, PLEASE EXPLAIN:

Questions 13 through 23 are the heart of the Physician's Report form (WC 200) which must be answered correctly by the physician in order for the claim to go through. Other questions on the form usually may be answered by the office staff.

GROUP INSURANCE

Officially sponsored by

WEST VIRGINIA STATE MEDICAL ASSOCIATION

SOUND PROTECTION

at a

SUBSTANTIAL SAVING IN COST

Please Send Me Descriptive Brochure On—

☐ **LONG TERM DISABILITY INCOME PROTECTION**
(Pays you a regular monthly benefit up to $2,000 per month when you are disabled)

☐ **$15,000 MAJOR HOSPITAL PLAN**
Covers you and your family up to $15,000 per person

☐ **LOW-COST LIFE INSURANCE**
In units of — $10,000 - $20,000 - $30,000 - $40,000 - $50,000

☐ **$100,000 ACCIDENTAL DEATH & DISMEMBERMENT INSURANCE**
Around the clock protection — 24 hours a day . . . 365 days a year . . . world wide

☐ **OFFICE OVERHEAD DISABILITY POLICY**
(Pays your office expense up to $3,500 per mo. while you are disabled)

☐ **A MUTUAL FUND PROGRAM**
Designed to qualify under HR-10

☐ **A MILLION DOLLAR CATASTROPHE LIABILITY POLICY**
(Covers: Malpractice—Home—Personal—Auto Liability)

Name _____ Address _____

MAIL TO: ADMINISTRATOR
McDONOUGH-CAPERTON-SHEPHERD-GOLDSMITH
P. O. BOX 1551 CHARLESTON, W. VA. (25326)

NOTE: A full time service representative travels the State and is always available for personal consultation. Your Resident Administrator provides complete service here in the State including processing and payment of claims.

THIRD-PARTY

(Continued from Page xii)

refer to the patient's period of disability. Obviously, in most cases it is impossible to predict the disability period with any great accuracy based on an initial examination and treatment. *However, the disability period noted on the Physician's Report is only expected to be an estimate.*

The Fund can only begin paying disability benefits once a claimant misses more than three days of work due to an occupational injury or disease. In addition, the Fund cannot pay disability benefits for the first three days of disability unless the claimant misses more than 14 days of work. Therefore, the physician's estimated period of disability is crucial since it gives the Fund an indication as to whether the individual will qualify for benefits and, if so, approximately the length of time he/she will be eligible. Periodic supplemental reports will give physicians an opportunity to revise this original estimate. If the patient's progress is exceptionally good and he or she returns to work prior to the date listed on the Physician's Report, the employer will notify the Fund.

Other questions of particular importance on the Physician's Report refer to (1) the type of injury or disease (Question 13), (2) the part of body affected (Question 14), (3) diagnosis code and description (Question 15), and (4) whether or not the injury/disease was job-related. Failure to answer these questions will most assuredly delay processing and may result in the return of the form.

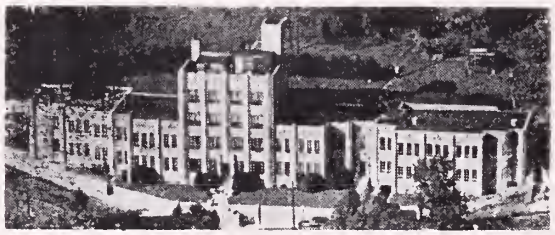
The Workmen's Compensation Fund, like any insurance company, depends on the medical community for medical management of claims. We therefore welcome any and all communications with physicians and their office staffs. Workmen's Compensation staff members are available for presentations before professional groups or detailed training sessions. Individual queries may be handled through correspondence or calls to the Fund's Claims Service Unit (1-800-642-9091 or 1-800-642-9092).

Virginia Psychiatric Hospital Plans Meet On The Aged

The Saint Albans Psychiatric Hospital in Radford, Virginia, will hold its annual spring conference on May 7. The theme is "Alternatives for the Aged."

The seminar speaker is Dr. Alvin I. Goldfarb, Associate Clinical Professor of Psychiatry, The Mt. Sinai School of Medicine of The City University of New York. Physicians and other health care professionals are invited to attend.

For further information, contact George K. White, Administrator, Saint Albans Psychiatric Hospital, Radford, Virginia 24141 (Telephone 703-639-2481).



Radiology:
Karl J. Myers, Sr., M. D.

Pathology:
Fulvia Franyutti, M. D.

Surgery:
Hu C. Myers, M. D.
A. Kyle Bush, M. D.
T. H. Chang, M. D.
J. W. Woodford, M. D.
A. Richard Weaver, M. D.

Gynecology and Obstetrics:
Raymond W. Cranlund, M. D.

Internal Medicine:
E. G. Guy, M. D.
B. G. Thimmappa, M. D.
Karl J. Myers, Jr., M. D.
Amitava Ghosal, M. D.

Pediatrics:
E. G. Kreider, M. D.
J. M. Nissley, M. D.

Dentistry:
Glenn B. Paling, D. D. S.

Family Practice:
Alan S. Peterson, M. D.

THE MYERS CLINIC
Philippi, West Virginia

Add up all the victims of blindness, paralytic polio, cerebral palsy, rheumatic heart disease. **Twice that total are mentally retarded.** What are you going to do about it?

Write for a free pamphlet from the National Association for Retarded Citizens, P.O. Box 6109, Arlington, Texas 76011

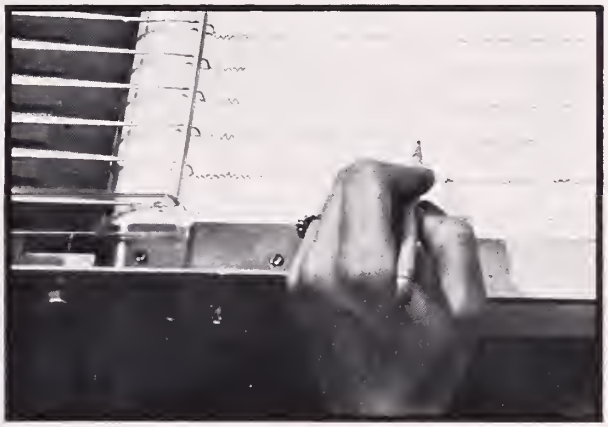
Name _____

Address _____

City _____

State _____ Zip Code _____

"This space contributed by the publisher as a public service."



Saint Albans Psychiatric Hospital

A fully accredited private psychiatric hospital for the treatment of all major psychiatric illnesses including alcoholism and drug abuse problems of adolescents and adults.

Radford, Virginia 24141
Telephone 703 639 2481

Obituaries

DUDLEY C. ASHTON, M. D.

Dr. Dudley C. Ashton, Beckley internist, died on March 29 in a hospital there. He was 78. Doctor Ashton had been on the staff of Beckley Hospital since 1934. He was a member of the Council of the State Medical Association from 1949 to 1951, and formerly served on the State's medical licensing board.

A native of Richmond, Virginia, Doctor Ashton was graduated from the University of Richmond and received his M. D. degree in 1924 from Johns Hopkins University School of Medicine. He interned in Baltimore hospitals and served a residency at the Medical College of Virginia Hospital.

He was a Diplomate of the American Board of Internal Medicine, and was a veteran of World Wars I and II.

Doctor Ashton was a member of the Raleigh County Medical Society, the West Virginia State Medical Association and the American Medical Association.

Surviving are three sisters, Miss Elma H. Ashton of Alexandria, Virginia; Mrs. Garland H. Sharp, Richmond, and Mrs. J. Brooks Nichols, Towson, Maryland.

* * *

ERNEST H. BITNER, M. D.

Dr. Ernest H. Bitner of Martinsburg died on March 2 in a Charles Town nursing home. He was 91. Doctor Bitner was a Past President of the Eastern Panhandle Medical Society and, in 1959, was chosen by the Society as the "General Practitioner of the Year."

A native of Kearneysville, in Jefferson County, Doctor Bitner was graduated from Shepherd College and received his M. D. degree in 1907 from the Atlantic Medical College in Baltimore. He served a year of internship at Grace Hospital in New Haven, Connecticut, before beginning practice in Martinsburg in 1908.

Active in Masonic circles, he was past Grand High Priest and Dean of the Grand Chapter of Royal Arch Masons of West Virginia; Past Grand Commander and Dean of the Grand Commandery of Knights Templar of West Virginia, and a member of the General Grand Chapter R.A.M. International.

A veteran of World War I, he was an honorary member of the Eastern Panhandle Medical Society, the West Virginia State Medical Association and the American Medical Association.

Surviving are two sisters-in-law, Mrs. Frederick P. Spillman and Mrs. Gilbert McKown, and a brother-in-law, Dr. Paul McKown, all of Martinsburg.

(Continued on Page xviii)

BRIEF SUMMARY OF
PRESCRIBING INFORMATION
ANTIMINTH ® (pyrantel pamoate)
ORAL SUSPENSION

Actions. Antiminth (pyrantel pamoate) has demonstrated anthelmintic activity against *Enterobius vermicularis* (pinworm) and *Ascaris lumbricoides* (roundworm). The anthelmintic action is probably due to the neuromuscular blocking property of the drug.

Antiminth is partially absorbed after an oral dose. Plasma levels of unchanged drug are low. Peak levels (0.05-0.13μg/ml) are reached in 1-3 hours. Quantities greater than 50% of administered drug are excreted in feces as the unchanged form, whereas only 7% or less of the dose is found in urine as the unchanged form of the drug and its metabolites.

Indications. For the treatment of ascariasis (roundworm infection) and enterobiasis (pinworm infection).

Warnings. *Usage in Pregnancy*: Reproduction studies have been performed in animals and there was no evidence of propensity for harm to the fetus. The relevance to the human is not known.

There is no experience in pregnant women who have received this drug.

The drug has not been extensively studied in children under two years; therefore, in the treatment of children under the age of two years, the relative benefit/risk should be considered.

Precautions. Minor transient elevations of SGOT have occurred in a small percentage of patients. Therefore, this drug should be used with caution in patients with preexisting liver dysfunction.

Adverse Reactions. The most frequently encountered adverse reactions are related to the gastrointestinal system.

Gastrointestinal and hepatic reactions: anorexia, nausea, vomiting, gastralgia, abdominal cramps, diarrhea and tenesmus, transient elevation of SGOT.

CNS reactions: headache, dizziness, drowsiness, and insomnia. Skin reactions: rashes.

Dosage and Administration. *Children and Adults*: Antiminth Oral Suspension (50 mg of pyrantel base/ml) should be administered in a single dose of 11 mg of pyrantel base per kg of body weight (or 5 mg/lb.); maximum total dose 1 gram. This corresponds to a simplified dosage regimen of 1 ml of Antiminth per 10 lb. of body weight. (One teaspoonful=5 ml.)

Antiminth (pyrantel pamoate) Oral Suspension may be administered without regard to ingestion of food or time of day, and purging is not necessary prior to, during, or after therapy. It may be taken with milk or fruit juices.

How Supplied. Antiminth Oral Suspension is available as a pleasant tasting caramel-flavored suspension which contains the equivalent of 50 mg pyrantel base per ml, supplied in 60 ml bottles and Unitcups™ of 5 ml in packages of 12.

ROERIG Pfizer

A division of Pfizer Pharmaceuticals
New York, New York 10017

One swallow does it

eliminates Pinworms and Roundworms with a single dose

- **Single dose effectiveness against both pinworms and roundworms**— The only single-dose anthelmintic effective against pinworms *and* roundworms.
- **Nonstaining**—to oral mucosa, stomach contents, stools, clothing or linen.
- **Well tolerated**—the most frequently encountered adverse reactions are related to the gastrointestinal tract.
- **Economical**—a single prescription will treat the whole family.
- **Highly acceptable**—pleasant-tasting caramel flavor.
- **Convenient**—just 1 tsp. for every 50 lbs. of body weight. May be taken without regard to meals or time of day.

ROERIG Pfizer
A division of Pfizer Pharmaceuticals
New York, New York 10017

Please see prescribing information on facing page. NSN 6505-00-148-6967

Antiminth® ORAL SUSPENSION
(pyrantel pamoate) equivalent to 50mg pyrantel/ml

(Continued from Page xvi)

JOSEPH E. WALTHALL III, M. D.

Dr. Joseph E. Walthall III of Anaheim, California, formerly of Athens, died on February 7 in an Anaheim hospital. He was 53. An otolaryngologist, Doctor Walthall was graduated from West Virginia University and received his M. D. degree in 1946 from Duke University School of Medicine.

Survivors include the mother, Mrs. Joseph E. Walthall, Jr., of Sacramento, California; four sons, Timothy, Pat, Michael and Joseph E. Walthall IV, all of Los Angeles; and a brother, Dr. Randolph Walthall of Sacramento.

* * *

LUDWIG FRANK, M. D.

Dr. Ludwig Frank of London, England, former Charleston gastroenterologist, died on February 25 in London. He was 91. Doctor Frank, a native of Wuerzburg, Germany, came to West Virginia in 1938 after practicing in Germany, where he received his M. D. degree in 1908.

A former member of the staff at Staats Hospital in Charleston, Doctor Frank went to England in 1960. He was an honorary member of the Kanawha Medical Society, the West Virginia State Medical Association and the American Medical Association.

Annual MCV Lectures On Hand May 20-21 In Richmond

The annual lecture series on "Surgery of the Upper Extremity" will be held by the Medical College of Virginia on May 20 and 21 at the Richmond Academy of Medicine.

The seminar is designed to benefit both surgeons and therapists involved in hand management. The program will provide analysis of traditional surgical and therapeutic techniques as well as the latest innovations such as microneurographic technique and bio-feedback.

The guest faculty will include Ernest Burch of Baltimore, Registered Physical Therapist; Mike Brown, O.T.R., Atlanta, Assistant Chief of Occupational Therapy and Coordinator of the Hand Management Center, Grady Memorial Hospital; L. T. Furlow, M. D., of Gainesville, Florida, Clinical Assistant Professor of Surgery, University of Florida School of Medicine; Dana Graham, O.T.R., of Chesterfield, Virginia, President of the Virginia Occupational Therapy Association; E. E. Peacock, Jr., M. D., Chairman of Surgery, University of Arizona School of Medicine; and Steven Wolf, Ph. D., R.P.T., Assistant Professor, Department of Rehabilitation Medicine, Emory University.

For further information contact: Department of Continuing Education, School of Medicine, Medical College of Virginia, Box 91, MCV Station, Richmond, Virginia 23298 (telephone 804-770-8207).

BLUEFIELD SANITARIUM CLINIC

525 BLAND STREET

BLUEFIELD, W. VA.

SURGERY

General:
HAMPTON ST. CLAIR, M. D.
EDWARD J. FLYNN, M. D.
R. A. RANA, M. D.

Thoracic and Cardiovascular:
R. W. NEILSON, JR., M. D.
JAMES P. THOMAS, M. D.

Neurosurgery:
WM. F. HILLIER, M. D.
E. L. GAGE, JR., M. D.

Urology:
STEVE J. MISAK, M. D.

Eye, Ear, Nose & Throat:
F. D. WHITE, M. D.

PEDIATRICS
GRADY McRAE, M. D.
E. M. SPENCER, M. D.

OBSTETRICS & GYNECOLOGY
E. W. McCAULEY, M. D.
CHARLES S. FLYNN, M. D.
T. KEITH EDWARDS, M. D.

INTERNAL MEDICINE
J. R. SHANKLIN, M. D.
KARL E. WEIER, M. D.
H. F. WARDEN, JR., M. D.
C. D. PRUETT, M. D.
R. O. ROGERS, JR., M. D.

NUCLEAR MEDICINE
C. D. PRUETT, M. D.
R. O. ROGERS, M. D.

PATHOLOGY
DAVID F. BELL, JR., M. D.
JOHN J. BRYAN, M. D.

ROENTGENOLOGY
GEORGE C. KING, M. D.
JOHN A. ANZIULEWICZ, M. D.

ANESTHESIOLOGY
DAVID H. GATHERUM, M. D.

EMERGENCY SERVICE
S. K. CHOPRA, M. D.
R. P. BHASIN, M. D.

BUSINESS MANAGER
JAMES L. FOSTER

County Societies

CABELL

The Cabell County Medical Society met on March 11 at the Gateway Inn in Huntington, with a scientific program on the physiology of exercise.

The Society unanimously approved three resolutions in commendation of Senators Jennings Randolph and Robert C. Byrd, and Governor Arch A. Moore, Jr., for their roles in bringing about the establishment of the Marshall University Medical School. The resolutions were forwarded to the Council of the State Medical Association.—Colin M. Craythorne, M. D., Secretary.

* * *

MERCER

The Mercer County Medical Society met on March 22 at the La Salute Club in Bluewell. The guest speaker was Dr. Alton Lee Hood, a medical missionary, who spoke on his work in Bangla, Thailand. Doctor Hood, who works through the Southern Baptist Foreign Mission Board, has been serving in a 25-bed Baptist hospital there. He was introduced by Dr. Robert Neilson, a member of the Society, who had spent a month at this hospital in 1975. Doctor Hood's interesting presentation was followed by a question-and-answer period in which many participated.—David F. Bell, Jr., M. D., Secretary.

McDOWELL

The McDowell County Medical Society met on March 10 at the Stevens Clinic Hospital in Welch. The program was presented by Dr. Ray E. Burger of Welch, who showed a film dealing with aging in the organic brain syndrome. Among the material discussed was the diagnosis of organic brain syndrome involving particularly the use of questions and the touch test to evaluate the mental acuity and the physical status of the patient.

A report was given on the voting on the optometry bill recently before the State Legislature by the legislators from this county.—Arthur A. Carr, M. D., Secretary.

* * *

MONONGALIA

The Monongalia Medical Society met on March 2 at the Ramada Inn in Morgantown. Dr. Richard B. Knapp, Professor and Chairman of Anesthesiology at the West Virginia University School of Medicine, presented a talk entitled, "Anesthesia—Past, Present, and Future," as a memorial to the late Dr. Eldon B. Tucker, Sr., of Morgantown, who was an anesthesiologist.

The Secretary commented on the report of the Committee on Medical Aspects of Sports of the State Medical Association. Dr. Herbert E. Warden, a member of the committee, commented that there is a great need for better medical supervision of high school and junior high athletics.—Barbara Jones, M. D., Secretary.

OFFICERS OF COMPONENT SOCIETIES

Society	President		Secretary		Meetings
Boone	Prabhond Chinuntdet	Madison	Harold H. Howell	Madison	3rd Wed.
Brooke	R. L. Velarde	Fallansbee	James E. Wise	Fallansbee	
Cabell	Chas. H. McKown, Jr.	Huntington	Colin M. Craythorne	Huntington	2nd Thurs.
Central West Virginia	I. Frank Hartman, II	Buckhannan	Joseph B. Reed	Buckhannon	As Sched.
Eastern Panhandle	Hiram Sizemore, Jr.	Shepherdstown	Everett S. Fagle	Martinsburg	2nd Wed.
Fayette	Jae N. Jarrett	Oak Hill	Carl R. Adkins	Fayetteville	1st Wed.
Greenbrier Valley	Herbert L. Pope	White Sul. Spgs.	T. O. Dotson	White Sul. Spgs.	2nd Wed.
Hancock	Irwin M. Bogarad	Weirton	Carlos L. Vasquez	Weirton	3rd Tues.
Harrison	Charles S. Harrison	Clarksburg	W. E. Williamson	Clarksburg	1st Thurs.
Kanawha	George A. Shawkey	Charleston	Richard C. Rashid	So. Charleston	2nd Tues.
Logan	Jorge J. San Pedro	Man	Enrico V. Rallos	Man	2nd Wed.
Marion	Robert G. Janes	Fairmont	Mary Jordan	Fairmont	Last Tues.
Marshall	Andrew J. Barger	Glen Dale	Michail Dolgovskij	Glen Dale	1st Tues.
Mason	Antonio G. Sola	Pt. Pleasant	Young Choi	Pt. Pleasant	4th Tues.
McDowell	Romulo Miranda	Welch	A. A. Carr	Welch	2nd Wed.
Mercer	James P. Thomas	Bluefield	John J. Mahood	Bluefield	3rd Mon.
Mingo	Robert J. Tchou	Williamson	Duane A. Schram	Williamson	2nd Wed.
Monongalia	Herbert E. Warden	Morgantown	H. Summers Harrison	Morgantown	1st Tues.
Ohio	Alfred D. Ghaphery	Wheeling	Francis J. Gaydosh	Wheeling	4th Tues.
Parkersburg Academy	Frederick D. Gillespie	Parkersburg	R. C. Cowan, Jr.	Parkersburg	1st Thurs.
Potomac Valley	Esteban Friera	Romney	Dewey F. Bensenhaver	Petersburg	2nd Wed.
Preston	Wm. H. Harriman, Jr.	Terra Alta	C. Y. Moser	Kingwood	4th Thurs.
Raleigh	Roy James Yates	Beckley	Wm. D. McLean	Beckley	3rd Thurs.
Summers	Buford W. McNeer	Hinton	E. L. Jimenez	Hinton	3rd Mon.
Tygart's Valley	Elvin G. Kreider	Philippi	A. Kyle Bush	Philippi	3rd Thurs.
Wetzel	Lemayne Coffield	New Martinsville	C. P. Watson	New Martinsville	Monthly
Wyoming	Frank J. Zsoldos	Mullens	George F. Fordham	Mullens	Quarterly

Book Review

HYPNOSIS IN THE RELIEF OF PAIN—By Ernest R. and Josephine R. Hilgard. William Kaufmann, Inc., Los Altos, Calif. 222 Pages. Price $10.

This book gives a sufficiently comprehensive account of the history and utilization of hypnosis, but it focuses primarily on the relief of pain. The use of hypnosis in the amelioration of pain has been known for many years but doctors who once looked upon such methods with skepticism now accept this modality with enthusiasm in selected cases.

The cases selected are ones which can be expected to obtain considerable or partial relief of pain, and their selection is predicated upon the patient's susceptibility to hypnosis which, incidentally, is greatly enhanced by the intense motivation for relief of intractable pain.

Induction of hypnosis, per se, is a relatively simple procedure, but utilizing this means of pain relief requires a great deal of skill and sophistication and often the expenditure of a considerable amount of time in training such patients. The authors, of Palo Alto, California, refer to Dr. Milton Erickson and Sacerdote as early pioneers in this field. This recognition is certainly well justified.

The use of hypnosis in the attenuation or complete relief of pain of obstetric and dentistry has been well documented and used by myself and myriads of others with gratifying results.

A great field for utilization of pain relief would seem to be in terminal cancer cases and other pain debilitating conditions which cannot be adequately handled by chemical analgesics alone.

It is to be hoped that this excellent work by the Hilgards will be read by all physicians interested in chronic or acute pain relief, and that a sufficient background in hypnosis be made a prerequisite to every medical student's armamentarium such that he will have available, in properly selected cases, an additional, highly effective tool for pain relief.—R. O. Pletcher, M. D.

Nurses To Attend WVU Conference On Coronary Revascularization

A conference on "Coronary Revascularization: Critical Care Nursing Consideration" will be held Monday, May 10, at the Medical Center Auditorium, West Virginia University, Morgantown.

The conference is designed for critical care registered nurses who are currently working and/or teaching in critical care units, intensive care units and cardiovascular units. It is sponsored by the Nursing Committee of the American Heart Association, West Virginia Affiliate; and co-sponsored by the Division of Continuing Education, WVU School of Nursing. Mary Brances Borgman, R. N., Chairman of the Nursing Committee, will preside.

VENEREAL DISEASE SERVICES

♦

24-Hour Toll-Free Number

♦

- CASE REPORTING
- DARKFIELD EXAMINATION
- V. D. CONSULTATION
- CASE FOLLOW-UP

♦

Dial 800-642-8244

♦

WEST VIRGINIA STATE DEPARTMENT OF HEALTH

Clinicard

CHEMISTRY ANALYZER #368

For Sale

The CLINICARD System is a totally integrated, high precision analytical system for the determination of frequently specified "stat" chemistries and serum enzymes. It requires remarkably little operator training. The system's unique design features measurably reduce the time required in chemistry preparation, and ensure that each chemistry must be done correctly before a result can be reported.

CONTACT

Ken Summers — Greg Skiles

348-7091

Kanawha Valley Bank, NA

Charleston, West Virginia

JUNE
1976

Vol. 72 No. 6

The WEST VIRGINIA Medical Journal

Official Organ of the West Virginia State Medical Assaciatian

Box 1031 Charleston, W. Va. 25324

EDITOR
George F. Evans, M. D. (1981)
Clarksburg

MANAGING EDITOR AND BUSINESS MANAGER
Mr. Charles R. Lewis
Charlestan

EXECUTIVE ASSISTANT
Mr. Custer B. Halliday
Charlestan

ASSOCIATE EDITORS

E. J. Van Liere, M. D. (1976)
Margantown

Stephen D. Ward, M. D. (1977)
Wheeling

Jahn M. Hartman, M. D. (1978)
Charleston

Vernan E. Duckwall, M.D.(1979)
Elkins

Thamas J. Holbroak, M.D.(1980)
Huntingtan

Jae N. Jarrett, M. D. (1982)
Oak Hill

Published monthly by the West Virginia State Medical Association under the direction of the Publication Committee. Original articles are accepted on condition that they are contributed solely to The Journal.

Entered as second-class matter January 1, 1926, at the post office at Charleston, West Virginia, under the act of March 3, 1879.

Subscription Rates: $10 a year in the U.S.A.; $15 in foreign countries; $2 per single copy. Advertising rates furnished on request. Address all communications to Business Manager, The West Virginia Medical Journal, Box 1031, Charleston, West Virginia 25324. Phone 346-0551.

Microfilm editions beginning with the 1972 volume are available from University Microfilms, Inc., 300 N. Zeeb Road, Ann Arbor, Michigan 48106.

Member 1976

CONTENTS

Scientific Department

Antimicrobial Therapy Series—Jack L. Le Frock, M.D.; Arthur I. Jacknowitz, Pharm. D.; Randall A. Prince, Pharm. D.; and Perry M. Kalis, M. D.

PART I: Use and Abuse of Antimicrobial Agents (A Critique) 127

PART II: Antimicrobial Usage In Patients With Renal Impairment 130

PART III: Treatment of Common Infectious Disorders 135

PART IV: Complication of Antimicrobial Therapy (An Overview) 146

The President's Page

Reach Out And Teach—Mrs. Robert R. Weiler, President, Woman's Auxiliary to the W. Va. State Medical Association 152

Editorials

Antibiotic Use 153

How Potted Can You Get? 154

General News

Annual Meeting Scientific Program Completed 155

CME Program at CAMC Approved 156

Continuing Education Activities 157

Symposium on Geriatric Patient 157

Buckhannon Chamber Honors Doctor Huffman 157

Kno-Koma Diabetic Camp August 1-14 158

81 WVU Medical School Graduates 159

Doctor Morgan Honored for Lung Text 160

AMA Convention in Dallas 160

WVU Medical Scholarships Delayed 161

Doctor Newman Health Council Chairman 162

State AAFP Supports Flu Vaccine Call 163

Malpractice Legislation Not Enacted 163

Doctor Sheils President of Pathologists 163

Dr. Joseph T. Mallamo Appointed to Council 164

Doctor Bateman Serving on AMA Committee 164

Special Departments

WVU Medical Center News x

Third-Party News, Views, Program Concerns xii

Obituaries xiv

County Societies xvi

Book Reviews xvii

1975 Annual Audit xviii

Classified Section xxiii

Index to Advertisers xxiv

respond to one

According to her major symptoms, she is a psychoneurotic patient with severe anxiety. But according to the description she gives of her feelings, part of the problem may sound like depression. This is because her problem, although primarily one of excessive anxiety, is often accompanied by depressive symptomatology. Valium (diazepam) can provide relief for both—as the excessive anxiety is relieved, the depressive symptoms associated with it are also often relieved.

There are other advantages in using Valium for the management of psychoneurotic anxiety with secondary depressive symptoms: the psychotherapeutic effect of Valium is pronounced and rapid. This means that improvement is usually apparent in the patient within a few days rather than in a week or two, although it may take longer in some patients. In addition, Valium (diazepam) is generally well tolerated; as with most CNS-acting agents, caution patients against hazardous occupations requiring complete mental alertness.

Also, because the psychoneurotic patient's symptoms are often intensified at bedtime, Valium can offer an additional benefit. An *h.s.* dose added to the *b.i.d.* or *t.i.d.* treatment regimen can relieve the excessive anxiety and associated depressive symptoms and thus encourage a more restful night's sleep.

Valium® (diazepam) IV

2-mg, 5-mg, 10-mg scored tablets

in psychoneurotic anxiety states with associated depressive symptoms

surveillance because of their predisposition to habituation and dependence. In pregnancy, lactation or women of childbearing age, weigh potential benefit against possible hazard.

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

ROCHE

Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

"The quality of mercy..."

That's your concern.

The quality of protection. That's Ætna Life & Casualty's concern.

And that's why Ætna has created a library of video tapes for your education. Potential sources and causes of malpractice. Even suggestions as to how claims might be prevented. What's more, you can get credit hours for viewing them! Check the list below:

"DO NO HARM"

For physicians and hospitals. Involves the four most vulnerable areas in the hospital for malpractice claims. (Color)

"NURSES, RELATED PROFESSIONS, MALPRACTICE"

Primarily pertains to nurses responsibilities as well as problems they may encounter in their practice.

"CAUSES AND PREVENTION OF MEDICAL MALPRACTICE"

Comprehensive coverage of studies made in various specialty fields. Goes into many causes of malpractice and some suggestions on how malpractice may be avoided.

"ELECTRICAL HAZARDS IN HOSPITALS"

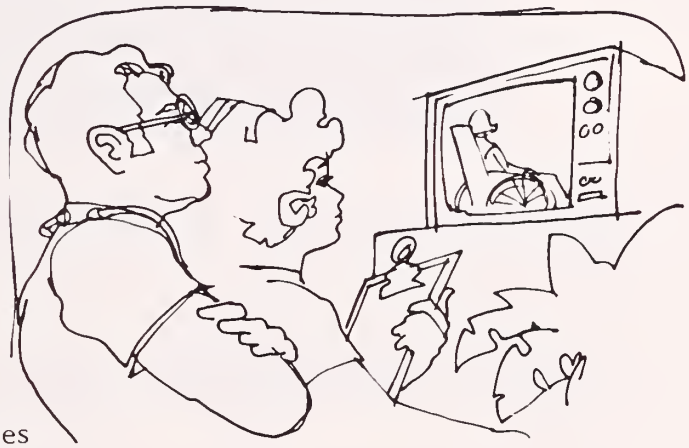
Gives physicians, nurses and technical personnel some basic knowledge of electrical equipment in a hospital and the dangers that electricity can cause there.

"COULD THIS BE YOU?"

Shows a physician violating all principles in the handling of a patient . . . and flashbacks to proper technique. (Color)

If any of these tapes are of interest to you or your local association, please contact:

Douglas Wall
Ætna Life & Casualty
516 Charleston National Plaza
Charleston, West Virginia 25301



Ætna
LIFE & CASUALTY

You get *action* with Ætna

WVU Medical Center
—News—

• Compiled from material furnished by Mrs. Mary Ellin Wylie, Director, Medical Center News and Information Services, Morgantown, W. Va.

DR. Maria Georgiev, who completed an internship at Wheeling Hospital and received her fellowship training in the Division of Cardiology at WVU, has been appointed Assistant Professor in the Department of Medicine at the Charleston Division. Doctor Georgiev recently passed the examination of the Specialty Board of Cardiovascular Diseases. She also is a Diplomate of the American Board of Internal Medicine.

Co-Authors Coronary Text

Dr. Samuel W. Webb, currently of the Division of Cardiology, is co-author of a text, *The Acute Coronary Attack*, published recently by Grune and Stratton.

Doctor Webb is undertaking advanced fellowship training and research in cardiology at WVU. He and his co-authors, Drs. J. F. Pantridge, A. A. G. Adgey and J. S. Geddes, are cardiologists on the staff of Ireland's Royal Victoria Hospital in Belfast, where the original comprehensive mobile coronary care unit was developed. Doctor Webb first cultivated an interest in his specialty in 1966, when he spent three months as a senior exchange medical student in the Division of Cardiology at WVU.

Elkins Junior Wins Prize

Marjorie L. Bush, junior from Elkins, has won the annual prize given by the Bernard Zimmermann Surgical Society, Inc. The prize of $100 and a certificate of recognition were awarded to Miss Bush for her outstanding performance in the surgical clerkship during her third year. She is the daughter of Mr. and Mrs. Neill Bush of Elkins.

The organization honoring Doctor Zimmermann, Professor and former Chairman of the Department of Surgery at WVU, was founded in 1974 by an international group that includes several of his former chief residents.

WVU Hospital Accredited

WVU Hospital has been accredited once again by the Joint Commission on Accreditation of Hospitals (JCAH). Notice of the approval was received recently by Eugene Staples, University Hospital Director. The accreditation, which covers a two-year period, is the result of an on-site survey made last fall by field representatives of the Commission's Hospital Accreditation Program.

Health Satellite Closed

WVU's Health Service is operating from one location, the main unit on the ground floor at University Hospital, after closing its satellite unit on the Downtown Campus at the end of the last semester. The decision was approved without dissent by the 10-member Health Service Advisory Committee composed of students, faculty and staff.

The satellite unit was averaging less than five visits per day, according to Douglas Clark, Assistant Director of University Hospital and a member of the committee. Closing it was discussed last year, he said, but the committee decided on a one-year wait-and-see period before reaching its decision.

Student Research Convocation

Eleven presentations were made at the WVU School of Medicine's Twelfth Annual Student Research Convocation, held recently in the Basic Sciences Building. Abstracts of each research project were submitted to the eight-member student and faculty convocation committee, for which Roy L. Butcher, Ph.D., of the Department of Obstetrics and Gynecology, was Chairman. The abstracts will be printed in the *West Virginia Medical Journal.*

Entrants competed for three prizes: the Edward J. Van Liere Medal and $100 for first place; $50 for second place, and $25 for third place. A committee appointed by the Dean of the School of Medicine, John E. Jones, M. D., judged the abstracts and presentations.

Dr. Michael Wilson, Professor and Chairman of Physiology and Biophysics, was the program moderator and William A. Neal, M. D., winner of the first WVU Medical Student Research Convocation, was the guest speaker. Doctor Neal, a member of the Class of 1966, is Assistant Professor of Pediatric Cardiology at WVU.

Dr. DiBartolomeo Presents Paper

Anthony G. DiBartolomeo, M. D., of the Department of Medicine, presented a paper at the national meeting of the American Federation for Clinical Research, held May 1 and 2 in Atlantic City, New Jersey. His topic was "Common HLA-D Antigen in Patients with Progressive Systemic Sclerosis."

The 8,500-member organization promotes and encourages original research in clinical and laboratory medicine.

Famous Fighters

NEOSPORIN® Ointment

(polymyxin B-bacitracin-neomycin)

is a famous fighter, too.

Provides overlapping, broad-spectrum antibacterial action to help combat infection caused by common susceptible pathogens (including staph and strep).

Each gram contains: Aerosporin® brand Polymyxin B Sulfate 5,000 units; zinc bacitracin 400 units; neomycin sulfate 5 mg (equivalent to 3.5 mg neomycin base); special white petrolatum qs in tubes of 1 oz and 1/2 oz and 1/32 oz (approx.) foil packets.

INDICATIONS: Therapeutically (as an adjunct to systemic therapy when indicated) for topical infections, primary or secondary, due to susceptible organisms, as in: • infected burns, skin grafts, surgical incisions, otitis externa • primary pyodermas (impetigo, ecthyma, sycosis vulgaris, paronychia) • secondarily infected dermatoses (eczema, herpes, and seborrheic dermatitis) • traumatic lesions, inflamed or suppurating as a result of bacterial infection.

Prophylactically, the ointment may be used to prevent bacterial contamination in burns, skin grafts, incisions, and other clean lesions. For abrasions, minor cuts and wounds accidentally incurred, its use may prevent the development of infection and permit wound healing. **CONTRAINDICATIONS:** Not for use in the eyes or external ear canal if the eardrum is perforated. This product is contraindicated in those individuals who have shown hypersensitivity to any of the components. **WARNING:** Because of the potential hazard of nephrotoxicity and ototoxicity due to neomycin, care should be exercised when using this product in treating extensive burns, trophic ulceration and other extensive conditions where absorption of neomycin is possible. In burns where more than 20 percent of the body surface is affected, especially if the patient has impaired renal function or is receiving other aminoglycoside antibiotics concurrently, not more than one application a day is recommended. **PRECAUTIONS:** As with other antibacterial preparations, prolonged use may result in overgrowth of nonsusceptible organisms, including fungi. Appropriate measures should be taken if this occurs. **ADVERSE REACTIONS:** Neomycin is a not uncommon cutaneous sensitizer. Articles in the current literature indicate an increase in the prevalence of persons allergic to neomycin. Ototoxicity and nephrotoxicity have been reported (see Warning section).

Complete literature available on request from Professional Services Dept. PML.

Wellcome

Burroughs Wellcome Co.
Research Triangle Park
North Carolina 27709

Third-Party News, Views and Program Concerns

• Prepared by state government agencies involved in health care, and other third-party organizations.

Three Changes In Workmen's Compensation Law

The last session of the West Virginia State Legislature enacted three changes in the existing Workmen's Compensation Law which will affect the medical community. These changes will be effective July 1, 1976, and will pertain only to those claims filed after that date and ruled compensable, Commissioner B. Frederick Becker has explained.

One major change in the law is that the period of time in which a medical vendor must submit his bill has been extended from one year to two years. This two-year period begins after the date of treatment or the date the service was rendered; it is *not* calculated from the date the injury occurred or the date that the claimant filed.

Until the law goes into effect, anyone submitting a medical bill has only one year in which to do so, while the injured person has two years to file his claim. Therefore, if a vendor waits until the claim is filed to submit his bills, it is possible for his time limit to expire. The new law was passed to eliminate this situation.

Despite this change in the law, medical vendors are still encouraged to submit their bills as soon as services are rendered and not to wait until the claim is filed. Their bills will then be paid when the claim is ruled compensable. Vendors will be notified if the Fund rules that the claim is not compensable or if the injured employee has not filed within the allotted time. Only then should the vendor look to the employee for payment.

A second change in the law raises the total amount that can be spent on an individual's physical or vocational rehabilitation from $4,000 to $10,000. This money can be spent toward the physical restoration of the claimant (i.e., prosthetic devices) or for vocational training, home modifications and counseling services.

Finally, at present, there is a $7,500 limitation for medical expenditures per claimant. Any amount over that has to be authorized by the Commissioner and drawn from a special fund rather than charged to the employer's account. Under the new law, there will be no ceiling on the amount that can be spent for justifiable medical expenditures related to a specific Fund claim *as long as the case is still open.*

It should be noted that any claim in which a permanent partial disability (PPD) award has been granted is considered closed for medical purposes. A PPD case may be reopened, in certain instances, for the purpose of paying medical bills.

Good Records Key To Defense Of Malpractice Claim

Good records are often the key to the successful defense of a malpractice claim. Without complete records, a physician can lose a case even when his management of the case was correct!

This is a point strongly emphasized by Aetna Life and Casualty, which provides, with the State Medical Association, a group program of professional liability insurance for state physicians.

The record, whether it be the hospital chart or office notes, must be complete enough to serve as a basis for planning and continuity of patient care, Aetna has stressed. It is the means of communication between the physician and other professionals contributing to patient care. It serves as documentary evidence of the course of a patient's illness and treatment, and serves as a basis for review, study and evaluation of the type of care rendered.

All entries should be dated and authenticated. Symbols and abbreviations should be used only when they have been approved by the medical staff and there is a legend to explain their meaning. The time of day should be noted on each entry where the patient experiences an unexpected bad result, is critically ill, or is considered litigious.

"Medical records should never be altered under any circumstances. To do so destroys the credibility as to the truthfulness of the records. When a wrong entry on the record has been made, a single line should be drawn through the entry. The date, initial and an explanation as to why the change is being made should be entered. Similar notations should be made when it is found necessary to add a new entry at a later date," Aetna has emphasized.

Telephone orders to the hospital should be given only to a licensed nurse. Such action should be limited to urgent circumstances, and they should be authenticated by the physician within 24 hours by entry of such authentication upon the doctor's order sheet, the company has noted.

"While good record-keeping is both time consuming and at times a tedious chore, it is necessary to protect the interest of the patient as well as the physician," Aetna has concluded.

GROUP INSURANCE

Officially sponsored by

WEST VIRGINIA STATE MEDICAL ASSOCIATION

SOUND PROTECTION

at a

SUBSTANTIAL SAVING IN COST

Please Send Me Descriptive Brochure On—

☐ **LONG TERM DISABILITY INCOME PROTECTION**
(Pays you a regular monthly benefit up to $2,000 per month when you are disabled)

☐ **$15,000 MAJOR HOSPITAL PLAN**
Covers you and your family up to $15,000 per person

☐ **LOW-COST LIFE INSURANCE**
In units of — $10,000 - $20,000 - $30,000 - $40,000 - $50,000

☐ **$100,000 ACCIDENTAL DEATH & DISMEMBERMENT INSURANCE**
Around the clock protection — 24 hours a day . . . 365 days a year . . . world wide

☐ **OFFICE OVERHEAD DISABILITY POLICY**
(Pays your office expense up to $3,500 per mo. while you are disabled)

☐ **A MUTUAL FUND PROGRAM**
Designed to qualify under HR-10

☐ **A MILLION DOLLAR CATASTROPHE LIABILITY POLICY**
(Covers: Malpractice—Home—Personal—Auto Liability)

Name _____ Address _____

MAIL TO: ADMINISTRATOR
McDONOUGH-CAPERTON-SHEPHERD-GOLDSMITH
P. O. BOX 1551 CHARLESTON, W. VA. (25326)

NOTE: A full time service representative travels the State and is always available for personal consultation. Your Resident Administrator provides complete service here in the State including processing and payment of claims.

Obituaries

PHILIP JOHNSON, M. D.

Dr. Philip Johnson, retired Fairmont surgeon, died on March 30 in a nursing home there. He was 77.

Doctor Johnson served as Chief of Staff at Fairmont Hospital and was physician for the Morgan and Talbott Mines of the Virginia Pittsburgh Coal Company.

He was Superintendent and surgeon at Fairmont Emergency Hospital from 1946 to 1957, and again from 1961 until his retirement in 1969. From 1957 to 1961, he was physician for Federal Mine 1 of Eastern Gas and Fuel Company at Grant Town.

Doctor Johnson initiated the medical program at Owens-Illinois Glass Company in Fairmont, and served as plant physician from the early 1930's until his retirement. He also was surgeon for the B. & O. Railroad Co., and was appointed by the U. S. Marshal as physician for federal prisoners.

A native of Ronceverte, Doctor Johnson was graduated from West Virginia University and received his M. D. degree in 1926 from the University of Maryland School of Medicine. He interned at St. Agnes Hospital in Baltimore and served a residency at Fairmont State Hospital.

Doctor Johnson was a Fellow of the American College of Surgeons, the International College of Surgeons, and the Industrial Medical Association. He also was an honorary member of the Marion County Medical Society, the West Virginia State Medical Association and the American Medical Association.

He was a veteran of World Wars I and II.

Survivors include the widow; two sons, Philip Johnson, Jr., of Santa Ana, California and William Johnson of Chartilly, Virginia; a daughter, Mrs. Bruce W. Johnson of Palo Alto, California; and a sister, Mrs. Carlyn Bibb of Maitland, Florida.

American Doctors Led Victory Over Yellow Fever

Within the lifetime of some Americans still living today, yellow fever was a feared and dreaded disease that swept American cities from time to time, striking tens of thousands and taking many lives.

Yellow fever likely was brought to the Americans in the 16th century from the Old World. In America it became a feared scourge, and New World doctors were the first to study the disease.

Dr. John Crawford of Baltimore is credited by medical historians as first determining that mosquitoes were the source of malaria, yellow fever and other diseases. Doctor Crawford clashed vigorously with the famed Dr. Benjamin Rush, a signer of the Declaration of Independence, who believed that yellow fever was caused by something foul in the air.

BRIEF SUMMARY OF
PRESCRIBING INFORMATION
ANTIMINTH ® (pyrantel pamoate)
ORAL SUSPENSION

Actions. Antiminth (pyrantel pamoate) has demonstrated anthelmintic activity against *Enterobius vermicularis* (pinworm) and *Ascaris lumbricoides* (roundworm). The anthelmintic action is probably due to the neuromuscular blocking property of the drug.

Antiminth is partially absorbed after an oral dose. Plasma levels of unchanged drug are low. Peak levels (0.05-0.13μg/ml) are reached in 1-3 hours. Quantities greater than 50% of administered drug are excreted in feces as the unchanged form, whereas only 7% or less of the dose is found in urine as the unchanged form of the drug and its metabolites.

Indications. For the treatment of ascariasis (roundworm infection) and enterobiasis (pinworm infection).

Warnings. *Usage in Pregnancy:* Reproduction studies have been performed in animals and there was no evidence of propensity for harm to the fetus. The relevance to the human is not known.

There is no experience in pregnant women who have received this drug.

The drug has not been extensively studied in children under two years; therefore, in the treatment of children under the age of two years, the relative benefit/risk should be considered.

Precautions. Minor transient elevations of SGOT have occurred in a small percentage of patients. Therefore, this drug should be used with caution in patients with preexisting liver dysfunction.

Adverse Reactions. The most frequently encountered adverse reactions are related to the gastrointestinal system.

Gastrointestinal and hepatic reactions: anorexia, nausea, vomiting, gastralgia, abdominal cramps, diarrhea and tenesmus, transient elevation of SGOT.

CNS reactions: headache, dizziness, drowsiness, and insomnia. Skin reactions: rashes.

Dosage and Administration. *Children and Adults:* Antiminth Oral Suspension (50 mg of pyrantel base/ml) should be administered in a single dose of 11 mg of pyrantel base per kg of body weight (or 5 mg/lb.); maximum total dose 1 gram. This corresponds to a simplified dosage regimen of 1 ml of Antiminth per 10 lb. of body weight. (One teaspoonful=5 ml.)

Antiminth (pyrantel pamoate) Oral Suspension may be administered without regard to ingestion of food or time of day, and purging is not necessary prior to, during, or after therapy. It may be taken with milk or fruit juices.

How Supplied. Antiminth Oral Suspension is available as a pleasant tasting caramel-flavored suspension which contains the equivalent of 50 mg pyrantel base per ml, supplied in 60 ml bottles and Unitcups™ of 5 ml in packages of 12.

ROERIG Pfizer

A division of Pfizer Pharmaceuticals
New York, New York 10017

One swallow does it

eliminates Pinworms and Roundworms with a single dose

- **Single dose effectiveness against both pinworms and roundworms**— The only single-dose anthelmintic effective against pinworms *and* roundworms.
- **Nonstaining**—to oral mucosa, stomach contents, stools, clothing or linen.
- **Well tolerated** — the most frequently encountered adverse reactions are related to the gastrointestinal tract.
- **Economical** — a single prescription will treat the whole family.
- **Highly acceptable** — pleasant-tasting caramel flavor.
- **Convenient** — just 1 tsp. for every 50 lbs. of body weight. May be taken without regard to meals or time of day.

ROERIG Pfizer
A division of Pfizer Pharmaceuticals
New York, New York 10017

Please see prescribing information on facing page. NSN 6505-00-148-6967

Antiminth® ORAL SUSPENSION
(pyrantel pamoate) equivalent to 50mg pyrantel/ml

County Societies

CABELL

The Cabell County Medical Society met on April 15 at the Gateway Inn in Huntington. Dr. George Hill II, Associate Dean for Clinical Affairs, and Chairman and Professor, Department of Surgery, Marshall University Medical School, gave an interesting talk on "Melanoma."

Dr. Charles H. McKown, Jr., President, also introduced two other guests, Mr. Robert Bradford of Charleston, Executive Vice President of the American Cancer Society, West Virginia Division; and Mr. Carlton Smith, Chairman of the Search and Screening Committee for the Marshall University Medical School; and Director of the Huntington Veterans Administration Hospital.

Mr. Bradford spoke on the functions of the Cancer Society in West Virginia, while Mr. Smith gave a report on the progress of the Search and Screening Committee.—Colin M. Craythorne, M. D., Secretary.

* * *

TYGART'S VALLEY

The Tygart's Valley Medical Society met on April 15 at Mellie's Restaurant in Philippi. The speaker was Dr. Donald E. McDowell, Chief of Surgery at the Veterans Administration Hospital in Clarksburg, whose topic was, "The Solitary Pulmonary Lesion."

Doctor McDowell stressed the use of tomography, x-ray, bronchoscopy and exploratory thoracotomy in the diagnosis of various pulmonary lesions. He illustrated his talk with numerous slides showing that one can be fooled by the appearance of a lesion. Approximately 10 to 25 per cent of solitary lesions of the lung will be carcinoma, he said.—A. Kyle Bush, M. D., Secretary.

* * *

MERCER

The Mercer County Medical Society met on April 19 in Bluefield. Dr. Darrell C. Belcher of Princeton, a member, presented patients and comments—along with slides and a short film, on "Total Joint Arthoplasty." One of the patients demonstrated bilateral hip arthroplasty results.

The Society pledged its full cooperation in the administering of the flu vaccine in 1976, and the Secretary was instructed to publish a resolution to this effect.—David F. Bell, Jr., M. D., Secretary.

* * *

MONONGALIA

The Monongalia County Medical Society met on April 6 at the Old Mill Club in Morgantown. Dr. Irvin M. Sopher, Chief Medical Examiner for the State of West Virginia, gave a very interesting talk on "The Medical Examiner System for the State of West Virginia."

BLUEFIELD SANITARIUM CLINIC

525 BLAND STREET

BLUEFIELD, W. VA.

ANESTHESIOLOGY
DAVID H. GATHERUM, M.D.

EMERGENCY SERVICE
S. K. CHOPRA, M.D.
B. P. BHASIN, M.D.

GASTROENTEROLOGY
LOUISE A. OWENS, M.D.

INTERNAL MEDICINE
H. F. WARDEN, M.D.
C. D. PRUETT, M.D.
R. O. ROGERS, M.D.

LABORATORY MEDICINE
DAVID F. BELL, JR., M.D.
JOHN J. BRYAN, M.D.

NEUROSURGERY
WILLIAM F. HILLIER, M.D.
E. L. GAGE, JR., M.D.
ADNAN SILK, M.D.

NUCLEAR MEDICINE
C. D. PRUETT, M.D.
R. O. ROGERS, M.D.

OB. & GYN.
CHARLES S. FLYNN, M.D.
T. KEITH EDWARDS, M.D.

OPHTHALMOLOGY
F. D. WHITE, M.D.

ORTHOPEDICS
EDWARD M. LITZ, M.D.

PEDIATRICS
GRADY McRAE, M.D.
E. M. SPENCER, M.D.

ROENTGENOLOGY
GEORGE C. KING, M.D.
JOHN A. ANZIULEWICZ, M.D.

THORACIC & VASCULAR SURGERY
ROBERT W. NEILSON, JR., M.D.
JAMES P. THOMAS, M.D.

UROLOGY
STEVE J. MISAK, M.D.

ADMINISTRATOR
JAMES L. FOSTER

COUNTY SOCIETIES—continued

The Society voted to make donations to Camp Apache for retarded children and Camp Kno-Koma for diabetic children.

The Society's Council distributed to the membership an analysis of the West Virginia Child Abuse Reporting Statute (Chapter 49, Article 6-A, Section 2) of the West Virginia Code, which was prepared by Dr. Marilyn J. Eckert of Morgantown. The analysis was accompanied by a brief report to the Council and membership, submitted by Dr. Margaret Stemple, on the activities of the Citizens Committee for Children Rights. Doctor Stemple is the Society's representative to the committee.—Barbara Jones, M. D., Secretary.

* * *

McDOWELL

The McDowell County Medical Society met on April 14 at Doctor's Memorial Hospital in Welch. The Society voted to support, in principle, the Swine Flu immunization program for a large proportion of the population, and to secure help in providing clinics for the inoculations.

A film on hypertension was shown by Dr. John S. Cook of Welch. Doctor Cook also presented an electrocardiogram of a private patient which had been seen and discussed at several teaching hospitals. The possibilities of Wolff-Parkinson-White syndrome or simple ventricular tachycardia were presented, but no definite conclusions were reached by the Society.—Arthur A. Carr, M. D., Secretary.

Book Review

CURRENT MEDICAL DIAGNOSIS & TREATMENT (KRUPP & CHATTON)—Lange Medical Publications, Drawer L, Los Altos, Calif. 1976. 1,056 Pages. Price $14.

This long book of 1,056 pages is the 13th Edition of a well-received compendium in medicine. It has some alterations and additions to the 1975 Edition, but the format is the same.

There are new methods of diagnosis and treatment in sufficient detail to fulfill the clinician's wishes.

The combination of diagnosis and therapy in a single volume is time-saving. The references are adequate for further insight.

The book has a large circulation and has been printed in several languages.

This ready reference is a good buy at $14.—George F. Evans, M. D.

Change of Address

Members of the West Virginia State Medical Association are requested to notify the headquarters offices promptly concerning any change in address. Notices should be mailed to Box 1031, Charleston, West Virginia 25324.

The Eye and Ear Clinic of Charleston, Inc.

(A Thirty-five Bed Proprietary Hospital)

CHARLESTON, WEST VIRGINIA 25301
Phone: 1-(304)-343-4371

OPHTHALMOLOGY

Edwin M. Shepherd, M.D.
Diplomate, American Board of Ophthalmology

Milton J. Lilly, Jr. M.D.
Diplomate, American Board of Ophthalmology

Robert E. O'Connor, M.D.
Diplomate, American Board of Ophthalmology

Moseley H. Winkler, M.D.
Diplomate, American Board of Ophthalmology

Retinal Surgery
Fluorescein Angiography
Argon Laser Photocoagulation
Contact Lenses
Strontium 90 Beta Irradiation

OTOLOGY

William C Morgan, Jr., M.D.
Diplomate, American Board of Otolaryngology

OTOLARYNGOLOGY

Romeo Y. Lim, M.D.
Diplomate, American Board of Otolaryngology
Micro-surgery
Maxillo-facial Surgery
Reconstructive Surgery
Head & Neck Surgery
Cryosurgery
Endoscopy
Oncology

OPHTHALMOLOGY and OTOLARYNGOLOGY

John B. Haley, M.D.
John A. B. Holt, M.D.
Diplomate, American Board of Ophthalmology

Ancillary Services

Orthoptics
Visual Fields—Flow Studies
Laboratory
X-ray
Audiometry

Audiology

Nancy McClung, M.S.

Anesthesia

Catherine Kenney, CRNA
Inez Maggio, CRNA
Muriel Dodds, CRNA

Annual Audit, 1975

The annual audit of receipts and disbursements of the West Virginia State Medical Association for the calendar year 1975 has been completed by the firm of Ernst & Ernst, Certified Public Accountants of Charleston. The completed audit, with accountants' report, follows:

ERNST & ERNST
Charleston National Plaza
P. O. Box 2906
Charleston, West Virginia 25330

To the Council
West Virginia State Medical Association
Charleston, West Virginia

We have examined the statements of assets, liabilities, and fund balances, arising from cash transactions, of the several funds of the West Virginia State Medical Association as of December 31, 1975, and December 31, 1974, and the related statements of revenues collected and expenses paid of the general fund, and changes in fund balances of the several funds for the years then ended. Our examinations were made in accordance with generally accepted auditing standards and, accordingly, included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

In our opinion, the aforementioned financial statements present fairly the assets, liabilities, and fund balances, arising from cash transactions, of the several funds of the West Virginia State Medical Association at December 31, 1975, and December 31, 1974, and the revenues collected and expenses paid of the general fund and changes in fund balances of the several funds for the years then ended on a consistent basis.

ERNST & ERNST

Charleston, West Virginia
March 23, 1976

AUDITED FINANCIAL STATEMENTS (CASH BASIS) WEST VIRGINIA STATE MEDICAL ASSOCIATION

December 31, 1975

STATEMENTS OF ASSETS, LIABILITIES, AND FUND BALANCES, ARISING FROM CASH TRANSACTIONS

	DECEMBER 31	
	1975	1974
UNRESTRICTED FUNDS		
ASSETS:		
Cash	$ 47,075	$ 4,533
Certificates of deposit	78,212	78,212
Other assets	36	36
	$125,323	$82,781
LIABILITIES:		
Notes payable to bank	$ —	$15,000
Payroll withholdings	969	—
Due to restricted funds	9,069	10,142
FUND BALANCES:		
Operations	109,100	57,639
Board designated	6,185	—
	115,285	57,639
	$125,323	$82,781
RESTRICTED FUNDS		
ASSETS:		
Cash	$ 33,574	$31,851
Certificates of deposit	7,805	7,805
Due from unrestricted funds	9,069	10,142
Investment in common stock—Note D	4,250	—
	$ 54,698	$49,798
FUND BALANCES:		
Medical scholarship	$ 50,448	$49,798
Endowment—Note D	4,250	—
	$ 54,698	$49,798

See notes to financial statements.

STATEMENTS OF REVENUES COLLECTED AND EXPENSES PAID — GENERAL FUND

	Year ended December 31	
	1975	1974
REVENUES COLLECTED:		
Dues	$345,463	$265,831
Advertising	18,536	18,835
Consulting fees	—	6,000
Interest	6,724	18,105
Contributions	5,346	6,736
Refund of expenses	3,019	5,880
Other revenues	12,940	8,152
	392,028	329,539
EXPENSES PAID:		
Dues remitted to AMA	132,155	135,885
Salaries and wages	72,447	60,390
Employee benefits	8,322	8,121
Taxes—payroll and other	6,314	3,388
Office rent	7,962	7,787
Office supplies and expenses	12,598	9,767
Telephone	4,934	3,834
Postage	5,155	4,188
Travel	25,676	22,888
Convention speakers and supplies	15,819	18,681
Publishing and printing	40,422	32,291
Expenses of professional liability education	345	—
Other expenses	8,763	4,981
	340,912	312,201
EXCESS OF REVENUES COLLECTED OVER EXPENSES PAID	$ 51,116	$ 17,338

See notes to financial statements.

STATEMENTS OF CHANGES IN FUND BALANCES ARISING FROM CASH TRANSACTIONS

Years ended December 31, 1975, and December 31, 1974

		RESTRICTED FUNDS	
	Unrestricted Funds	Medical Scholarship Fund	Endowment Fund
Balance, December 31, 1973	$ 40,301	$45,075	$ —
Excess of revenues collected over expenses paid	17,338	—	—
Dues	—	8,247	—
Repayment of loans	—	3,000	—
Interest collected	—	2,456	—
Other	—	20	—
Payment of scholarship installments	—	(9,000)	—
Balance, December 31, 1974	57,639	49,798	—
Excess of revenues collected over expenses paid	51,116	—	—
Dues	—	8,892	—
Repayment of loans	—	1,000	—
Interest collected	—	1,723	—
Contributions	—	35	—
Payment of scholarship installments	—	(11,000)	—
Receipt of special assessment	6,530	—	—
Restricted bequest	—	—	4,250
Dividends received	—	—	646
Transfer or grant to unrestricted funds	—	—	(646)
Balance, December 31, 1975	$115,285	$50,448	$4,250

See notes to financial statements.

NOTES TO FINANCIAL STATEMENTS (CASH BASIS) WEST VIRGINIA STATE MEDICAL ASSOCIATION

Years ended December 31, 1975, and December 31, 1974

NOTE A — PRESENTATION OF FINANCIAL STATEMENTS

The financial statements are presented using the cash basis of accounting. Office equipment and other capital expenditures are charged to expense at time of purchase. Certificates of deposit earn interest quarterly, which is being recorded as collected and earned.

NOTE B — LITIGATION

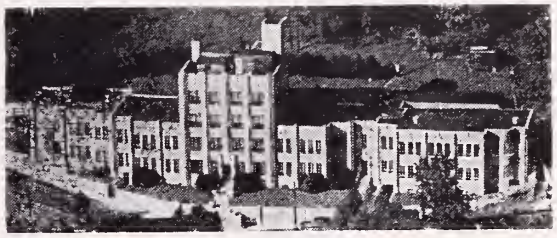
During the year a class action suit was instituted by a group of practitioners of Chiropractic Medicine against Blue Shield of Southern West Virginia and numerous other defendants which include the West Virginia State Medical Association. The suit alleges a violation of certain sections of the Sherman Act. This action was dismissed in the lower courts and is currently under appeal by the Plaintiffs.

NOTE C — PENSION PLAN

The Pension Reform Act of 1974 will require additional amendments to the pension plan which will nominally increase pension costs. The amendments will be effective for the plan year to begin December 15, 1976. The impact of these amendments on future pension costs is not expected to be significant.

NOTE D — ENDOWMENT FUND

During 1975, the Association received a bequest of common stock which was recorded at fair market value at date of receipt. Income from the fund is restricted to defray costs of the Association's annual meeting.



Radiology:
Karl J. Myers, Sr., M. D.

Pathology:
Fulvio Franyutti, M. D.

Surgery:
Hu C. Myers, M. D.
A. Kyle Bush, M. D.
T. H. Chang, M. D.
J. W. Woodford, M. D.
A. Richard Weaver, M. D.

Gynecology and Obstetrics:
Raymond W. Cranlund, M. D.

Internal Medicine:
E. G. Guy, M. D.
B. G. Thimmappa, M. D.
Karl J. Myers, Jr., M. D.
Amitava Ghosal, M. D.

Pediatrics:
E. G. Kreider, M. D.
J. M. Nissley, M. D.

Dentistry:
Glenn B. Poling, D. D. S.

Family Practice:
Alan S. Petersan, M. D.

THE MYERS CLINIC
Philippi, West Virginia

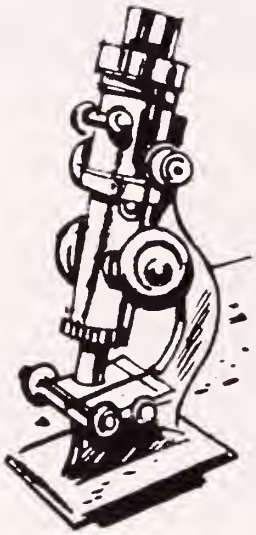
NEW!
Welch Allyn
Halogen Diagnostic Set

- Twice the light intensity of conventional instruments
- Twice the life between lamp replacements
- Superior color fidelity—closer to natural sunlight
- Higher percentage of initial output throughout lamp life
- Distinctive black chrome rechargeable battery handles

WELCH ALLYN
WELCH ALLYN, INC.
Skaneateles Falls, N. Y. 13153

Ask for a demonstration.

HOSPITAL & PHYSICIANS SUPPLY CO.
511 BROOKS STREET 344-3554
CHARLESTON, WEST VIRGINIA



Morgantown Medical Laboratory

596 Willey Street, Morgantown, WV 26505

Phone: (304) 292-3313

Lawrence F. Martin, M.D., Director

Phillip Cohen, M. D., Medical Director

John A Jupin, M.D., Pathologist

Reference services offered in:

Bacteriology
Parasitology
Serology
Chemistry
Hematology
Immunohematology
Diagnostic Cytology
Radiobioassay
Pathology

Specimen Containers, Mailers and Fee Schedules promptly forwarded upon request

JULY
1976

Vol. 72 No. 7

The WEST VIRGINIA Medical Journal

Official Organ of the West Virginia State Medical Association

Box 1031 Charleston, W. Va. 25324

EDITOR
George F. Evans, M. D. (1981)
Clarksburg

MANAGING EDITOR AND BUSINESS MANAGER
Mr. Charles R. Lewis
Charlestan

EXECUTIVE ASSISTANT
Mr. Custer B. Holliday
Charleston

ASSOCIATE EDITORS

E. J. Van Liere, M. D. (1976)
Morgantown

Stephen D. Ward, M. D. (1977)
Wheeling

John M. Hartmon, M. D. (1978)
Charleston

Vernan E. Duckwall, M.D.(1979)
Elkins

Thomas J. Halbroak, M.D.(1980)
Huntington

Joe N. Jarrett, M. D. (1982)
Oak Hill

Published monthly by the West Virginia State Medical Association under the direction of the Publication Committee. Original articles are accepted on condition that they are contributed solely to The Journal.

Entered as second-class matter January 1, 1926, at the post office at Charleston, West Virginia, under the act of March 3, 1879.

Subscription Rates: $10 a year in the U.S.A.; $15 in foreign countries; $2 per single copy. Advertising rates furnished on request. Address all communications to Business Manager, The West Virginia Medical Journal, Box 1031, Charleston, West Virginia 25324. Phone 346-0551.

Microfilm editions beginning with the 1972 volume are available from University Microfilms, Inc., 300 N. Zeeb Road, Ann Arbor, Michigan 48106.

Member 1976

CONTENTS

Scientific Articles

Tympanometry and the Physician—Robert C. Cody, M. A. 165

Clinical Experience With Intrauterine Devices As A Means of Contraception in Kanawha County, West Virginia—Saeed Mahmoodian, M. D. 170

Lens Implant in Cataract Surgery—Further Experience—M. C. Korstanje, M. D. 175

Scientific Department

Medical Grand Rounds from the West Virginia University Medical Center (Pheochromocytoma)—Edited by Raymond B. Weiss, M. D. 178

The President's Page

A Bit of Heaven, West Virginia—Jack Leckie, M. D., President, W. Va. State Medical Association 184

Editorials

Dedication and Dr. Jay Bradish 185

Risk in Sun-tanning 186

Words Frequently Misused by Physicians 186

General News

Olympic Winner Annual Meeting Honor Guest 188

Spring Meeting of Council 189

Doctor Parrott Weirton Event Guest 192

M. U. Acquires Ambulatory Care Center 193

Association Awards Four WVU Scholarships 194

Huntington Urology Seminar in October 195

Wheeling Clinic Plans Scientific Meeting 196

Special Departments

WVU Medical Center News xii

Third-Party News, Views, Program Concerns xiv

Obituaries xvi

County Societies xvii

Woman's Auxiliary xviii

Classified Section xxi

Index to Advertisers xxii

respond to one

According to her major symptoms, she is a psychoneurotic patient with severe anxiety. But according to the description she gives of her feelings, part of the problem may sound like depression. This is because her problem, although primarily one of excessive anxiety, is often accompanied by depressive symptomatology. Valium (diazepam) can provide relief for both—as the excessive anxiety is relieved, the depressive symptoms associated with it are also often relieved.

There are other advantages in using Valium for the management of psychoneurotic anxiety with secondary depressive symptoms: the psychotherapeutic effect of Valium is pronounced and rapid. This means that improvement is usually apparent in the patient within a few days rather than in a week or two, although it may take longer in some patients. In addition, Valium (diazepam) is generally well tolerated; as with most CNS-acting agents, caution patients against hazardous occupations requiring complete mental alertness.

Also, because the psychoneurotic patient's symptoms are often intensified at bedtime, Valium can offer an additional benefit. An *h.s.* dose added to the *b.i.d.* or *t.i.d.* treatment regimen can relieve the excessive anxiety and associated depressive symptoms and thus encourage a more restful night's sleep.

Valium® (diazepam) IV

2-mg, 5-mg, 10-mg scored tablets

in psychoneurotic anxiety states with associated depressive symptoms

surveillance because of their predisposition to habituation and dependence. In pregnancy, lactation or women of childbearing age, weigh potential benefit against possible hazard.

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

ROCHE

Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

Saint Albans Psychiatric Hospital

A fully accredited private psychiatric hospital for the treatment of all major psychiatric illnesses including alcoholism and drug abuse problems of adolescents and adults.

Radford, Virginia 24141
Telephone 703 639 2481

WVU Medical Center
—News—

• Compiled from material furnished by Mrs. Mary Ellin Wylie, Director, Medical Center News and Information Services, Morgantown, W. Va.

W. Keith C. Morgan, M. D., Professor of Medicine and Chief of the Pulmonary Division, has been elected Chief of the West Virginia University Hospital medical and dental staff.

Also named at the annual staff election held recently were Charles M. Davis, Jr., M. D., Associate Professor of Orthopedic Surgery, Assistant Chief; and Mabel Stevenson, M. D., Professor of Clinical Pathology, Secretary.

Elected as staff representative-at-large to the executive and credentials committee were: N. LeRoy Lapp, M. D., Assistant Dean and Associate Professor of Medicine; William A. Neal, M. D., Assistant Professor of Pediatrics; Dominic A. Antico, M. D., Assistant Professor of Radiology; Herbert A. Warden, M. D., Professor of Surgery; and Robert J. Marshall, M. D., Professor of Medicine.

New Approach To Gynecological Cancer

A more specialized approach to the diagnosis, treatment and follow-up of gynecological cancer has been implemented by the WVU Medical Center with the establishment of an outpatient clinic and hospital service devoted exclusively to malignancies of the female reproductive system.

Headed by Josh Tunca, M. D., Assistant Professor in the School of Medicine and Director of Gynecologic Oncology for University Hospital, the referral service includes diagnosis, surgery and chemotherapy, and coordinates treatment with the Division of Radiation Therapy.

The total approach to the problem of diagnosis, treatment and rehabilitation of gynecologic cancer patients also requires that social workers and physical therapists work as part of the clinical team, Doctor Tunca explained.

Doctor Tunca joined the faculty of the School of Medicine last September. A native of Turkey, he received his medical education in that country and his postgraduate training at New Hanover Memorial Hospital in Wilmington, North Carolina, and at Bowman Gray School of Medicine of Wake Forest University. He came to WVU from Emory University School of Medicine in Atlanta, where he spent two years as a gynecologic oncology fellow.

"Approximately 80 per cent of all gynecologic referrals are for cancer," said Doctor Tunca. "We believe we get better results in a clinic devoted completely to malignancies of this type."

Functioning as a follow-up diagnostic clinic for women with abnormal cervical cytology detected by Pap smears, the service uses colposcopy as a first step in confirming or ruling out the presence of malignancy of the cervix. "Colposcopy is also helpful in screening 'DES babies,'" Doctor Tunca added.

"The colposcope helps us tremendously in understanding the genesis of early cervical cancer," said Doctor Tunca. "By its use we have been able to cut down on conization and its complications by almost 90 per cent."

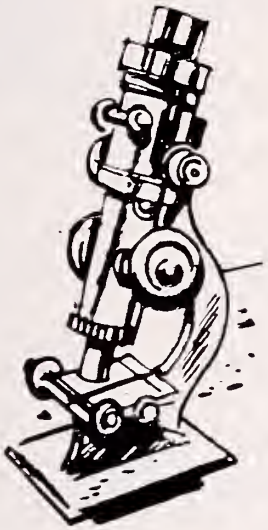
Conization, the removal of a cone of tissue from the cervix, may cause hemorrhage, infection, infertility or adhesion of the cervical canal, Doctor Tunca explained. Colposcopy is especially indicated for diagnosis of abnormal cytology in pregnant women, he added.

If a colposcopic examination reveals presence of disease, a small amount of tissue is taken for a biopsy, Doctor Tunca explained. These diagnostic procedures can be done during an outpatient visit and do not require hospitalization.

A more advanced and sophisticated method of diagnosing endometrial cancer will be used in the clinic within a short time with the addition of the Vabra aspirator now on order. This equipment makes possible examination of cell washings from the uterus and possibly in the near future could replace dilation and curettement as a method of diagnosing endometrial cancer. Doctor Tunca explained that the aspiration method takes only three minutes, can be done on an outpatient basis, and requires only analgesia. It would be especially useful in screening women believed at greater risk of developing this type of cancer. This group would include postmenopausal women on prolonged estrogen therapy or patients who do not ovulate for prolonged times.

Doctor Tunca sees his role as Director of Gynecologic Oncology at the Medical Center as not only those of clinician and teacher, but also as a consultant in genital cancer for the State's physicians.

"I want to go to the communities and medical society meetings to explain the concepts of gynecologic oncology and urge the expansion of screening programs," he said. "The epidemiology of cervical cancer seems to be changing. We are detecting more carcinoma *in situ* in women below 25 years of age. This may be due both to screening of younger women and to an increase of carcinoma *in situ*. As late as 1960, most screening was confined to women 30 years of age or older."



Morgantown Medical Laboratory

596 Willey Street, Morgantown, WV 26505

Phone: (304) 292-3313

Lawrence F. Martin, M.D., Director

Phillip Cohen, M. D., Medical Director

John A Jupin, M.D., Pathologist

Reference services offered in:

Bacteriology
Parasitology
Serology
Chemistry
Hematology
Immunohematology
Diagnostic Cytology
Radiobioassay
Pathology

Specimen Containers, Mailers and Fee Schedules promptly forwarded upon request

Third-Party News, Views and Program Concerns

• Prepared by state government agencies involved in health care, and other third-party organizations.

Work Launched on Standards To Measure Impairment

Representatives from the West Virginia State Medical Association and the Workmen's Compensation Fund met in late May to continue working toward a common goal: setting statewide standards for evaluating impairment and shifting the responsibility for evaluating disability from the medical community to the Fund.

While the evaluation of impairment is purely a medical function, disability evaluations depend upon a number of nonmedical factors and should be an administrative, not medical, function and responsibility.

In the past, the Fund has relied heavily upon the medical community to evaluate a claimant's impairment and assist in determining the individual's disability. Clearly, Workmen's Compensation was not sharing the responsibility of claimant evaluations with the medical community. For this reason, the Fund began attempting to upgrade its capabilities to make disability evaluations based on medical evidence.

During this process, WCF found a need for adopting uniform criteria for evaluating both impairment and disability. This idea was not new. An article concerning the need for standardizing impairment evaluations appear in the September 27, 1958, issue of the Journal of the American Medical Association.

After talking to members of the State Medical Association and after conducting research, the Fund found the idea to be generally well accepted by all groups. WCF staff members began meeting with Charles R. Lewis, Executive Secretary of the State Medical Association. Following consultations with Mr. Lewis and various physicians, it was agreed that the Fund would use one of the texts cited in the resolution adopted by the Medical Association at its annual meeting in August, 1975. The American Medical Association's Guide to the Evaluation of Permanent Impairment was the text chosen because the definitions of impairment and disability outlined in the guide are so closely related to West Virginia's WCF law.

The meetings with Mr. Lewis led to an impairment seminar held in January at the Daniel Boone Hotel in conjunction with the Mid-Winter Clinical Conference sponsored by the Medical Association and other organizations. Featured speaker of the seminar was Raymond McKeown, M. D., of the AMA committee charged with the responsibility of establishing guidelines for impairment evaluations. Doctor McKeown stressed the need for uniformity in evaluations as well as the importance of separating the responsibility of judging impairment from disability determinations.

In subsequent meetings with Mr. Lewis; and Dr. Robert Ghiz, Dr. Carl J. Roncaglione and Dr. Kennth MacDonald, all of Charleston, it was decided to limit the standard impairment evaluations effort to those medical specialties embracing the majority of compensation cases. Mr. Lewis then provided the Fund with a list of physicians in each specialty serving on Medical Association committees or in key medical specialty roles. From this list, committee coordinators were chosen. These coordinators were provided with background information concerning the project and asked to participate in a meeting with Fund staff members on May 26, 1976.

At that meeting, Doctor Roncaglione demonstrated how the AMA guidelines could be used for impairment forms in orthopedic cases and adapted for other medical fields.

Many of the problems involved and the points that need to be covered in setting impairment guidelines were brought up at the meeting. The problem of how long to extend physical therapy was discussed. Questions concerning criteria for evaluating intangibles such as pain and scar tissue causing disfigurement but no functional disability were also discussed. Many of these questions are covered in the AMA guidebook, and others will depend upon the physician's discretion. However, it is important to note that the meeting provided both the Fund and physicians with an excellent forum for discussing these subjects.

It is hoped this meeting will help reduce some of the guesswork and eliminate any discrepancies that may exist in evaluating West Virginia compensation cases.

Physicians attending this meeting agreed to work with members of their specialty sections and societies affiliated with the State Medical Association to determine the information which must be contained on their specialties' evaluation forms.

(Continued on Page xix)

GROUP INSURANCE

Officially sponsored by

WEST VIRGINIA STATE MEDICAL ASSOCIATION

SOUND PROTECTION

at a

SUBSTANTIAL SAVING IN COST

Please Send Me Descriptive Brochure On—

☐ **LONG TERM DISABILITY INCOME PROTECTION**
(Pays you a regular monthly benefit up to $2,000 per month when you are disabled)

☐ **$15,000 MAJOR HOSPITAL PLAN**
Covers you ond your fomily up to $15,000 per person

☐ **LOW-COST LIFE INSURANCE**
In units of — $10,000 - $20,000 - $30,000 - $40,000 - $50,000

☐ **$100,000 ACCIDENTAL DEATH & DISMEMBERMENT INSURANCE**
Around the clock protection — 24 hours a day . . . 365 days a yeor . . . world wide

☐ **OFFICE OVERHEAD DISABILITY POLICY**
(Pays your office expense up to $3,500 per mo. while you are disabled)

☐ **A MUTUAL FUND PROGRAM**
Designed to qualify under HR-10

☐ **A MILLION DOLLAR CATASTROPHE LIABILITY POLICY**
(Covers: Molpractice—Home—Personal—Auto Liability)

Name _____ Address _____

MAIL TO: ADMINISTRATOR
McDONOUGH-CAPERTON-SHEPHERD-GOLDSMITH
P. O. BOX 1551 CHARLESTON, W. VA. (25326)

NOTE: A full time service representative travels the State and is always available for personal consultation. Your Resident Administrator provides complete service here in the State including processing and payment of claims.

Obituaries

HUBERT T. MARSHALL, M. D.

Dr. Hubert T. Marshall, retired Morgantown physician and administrator, died on May 12 at his home there. He was 70.

A native of Mingo, in Randolph County, Doctor Marshall took his undergraduate work at Davis and Elkins College and the University of Louisville, where he earned both A. B. and M. S. degrees. He received his M. D. degree in 1932 from the University of Louisville School of Medicine.

Doctor Marshall entered the U. S. Army Medical Corps in 1934, retiring 15 years later with the rank of colonel.

During his military career he served as Army medical purchasing officer in Berlin, advancing to commanding officer of the installation in his service there from 1940 to 1945.

In 1945, he joined the staff of the Office of Military Government in Berlin, serving as Deputy Chief of Public Health during his three-year service. He also served as the U. S. member of the Health Committee of the Allied Control Commission.

Upon his retirement from military service, he served as health officer for Morgan, Berkeley and Jefferson counties for a year.

Doctor Marshall then took a post as Assistant Area Medical Administrator for the United Mine Workers of America Welfare and Retirement Fund's St. Louis area office. In 1951, he became the area medical administrator with the UMWA Welfare and Retirement Fund office in Morgantown.

He served in this post for 18 years, until 1969, when he accepted a position as Assistant to the Executive Medical Officer of the fund's Washington office. He served there until his retirement in July of 1970.

Doctor Marshall also was a former member of the Medical Advisory Committee to the West Virginia Division of Vocational Rehabilitation.

He was an honorary member of the Monongalia County Medical Society, the West Virginia State Medical Association and the American Medical Association; and a member of the American Public Health Association, the West Virginia Association for Mental Health, and the International and Civic Affairs Health Society.

Survivors include the widow; a son, Hubert T. Marshall II of Fishkill, New Jersey; three stepchildren, C. Frank Fleming II of Ashtabula, Ohio; Mrs. David E. Warnick of Sterling Park, Virginia, and Mrs. Donald E. Stevenson of Greensboro, Pennsylvania; and two brothers, Dr. Jennings B. Marshall of Louisville and Frank P. Marshall of Mingo.

* * *

THOMAS G. MATNEY, M. D.

Dr. Thomas G. Matney of Peterstown in Monroe County died June 11 in a Pearisburg, Virginia, hospital. He was 87.

A graduate of Valparaiso University, and the Chi-

(Continued on Page xviii)

General and Thoracic Surgery
Stephen T. J. Lee, M. D.
James A. Gardner, M. D.

Orthopedics
Clifford A. Stevenson, M. D.
S. A. Zahir, M. D.
Maria C. Ramas, M. D.
George Orphanos, M. D.

Obstetrics-Gynecology
A. Ray Jacobson, M. D.
Mariamma Abraham, M. D.

Ophthalmology
Edward T. Liu, M. D.

Urology
S. L. Francis, M. D.

Southern West Virginia Clinic

Stanaford Road, P. O. Box 50
Beckley, West Virginia 25801
Phone (304) 252-7331

Internal Medicine
Preston C. Davis, M. D.
Joseph A. Maiolo, M. D.
Eugene Warvariv, M. D.
R. James Yates, M. D.
S. L. Bembalkar, M. D.

Pediatrics
P. B. Goga, M. D.
Raquel S. Israel, M. D.

Radiology
Thomas L. Martin, M. D.

Clinic Manager
James P. Bland

County Societies

MONONGALIA

The Monongalia County Medical Society met on May 4 at the Old Mill Club in Morgantown. Dr. Josh Tunca, Assistant Professor of Obstetrics and Gynecology at the West Virginia University School of Medicine, spoke on "The Early Detection of Cervical Neoplasia by Colposcopy." Beautiful slides were shown along with a discussion of the development of carcinoma *in situ* and its diagnosis.

The Society approved a donation of $400 to Camp Braille-Crest, camp for the blind.—H. Summers Harrison, M. D., Acting Secretary.

* * *

CABELL

The Cabell County Medical Society met on May 13 at the Gateway Inn in Huntington. Dr. Charles H. McKown, Jr., the President, introduced the guests, who were Sue Carlson, Project Director, Appalachian Emergency Medical Services, Inc.; and Mr. Robert Boggs, Director of Valley Health Systems, who commented on the function of that organization.

The speaker for the evening was Dr. Fred M. Cooley, M. D., Medical Director of the West Virginia Division of Emergency Medical Services.—Colin M. Craythorne, M. D., Secretary.

MERCER

The Mercer County Medical Society met on May 24 at the Dinner Belle Restaurant in Princeton. The guests were Dr. Jack Leckie of Huntington, President of the State Medical Association, and Mrs. Leckie.

Dr. John J. Mahood of Bluefield introduced Doctor Leckie, who summarized his year in office and inspired the physicians present by his enthusiasm.—David F. Bell, Jr., M. D., Secretary-Treasurer.

* * *

HARRISON

The Harrison County Medical Society met on May 6 at the Sheraton Inn in Clarksburg. A symposium on heart failure was presented by Franklin W. Griff, M. D., Assistant Professor of Medicine at the University of Pittsburgh School of Medicine. Assisting on the panel were Chester Solez, M. D., Clarksburg Veterans Administration Hospital, and Lynwood D. Zinn, M. D., United Hospital Center, Inc., Clarksburg.

Dr. Julian D. Gasataya of Lumberport was elected President of the Society for 1976-77. Other officers named were Drs. Walter E. Williamson, Jr., of Bridgeport, Vice President; Reverdy H. Jones, Jr., Clarksburg, Secretary; and John V. Brannon, Bridgeport, Treasurer.—Reverdy H. Jones, Jr., M. D., Secretary.

OFFICERS OF COMPONENT SOCIETIES

Society	President		Secretary		Meetings
Boone	Prabhond Chinuntdet	Modison	Harold H. Howell	Madison	3rd Wed.
Brooke	R. L. Velarde	Follansbee	James E. Wise	Follansbee	
Cabell	Chas. H. McKown, Jr.	Huntington	Colin M. Craythorne	Huntington	2nd Thurs.
Central West Virginia	I. Frank Hartman, II	Buckhannon	Joseph B. Reed	Buckhannon	As Sched.
Eastern Panhandle	Hiram Sizemore, Jr.	Shepherdstown	Everett S. Fogle	Martinsburg	2nd Wed.
Foyette	Joe N. Jarrett	Ook Hill	Carl R. Adkins	Fayetteville	1st Wed.
Greenbrier Valley	Herbert L. Pope	White Sul. Spgs.	T. O. Dotson	White Sul. Spgs.	2nd Wed.
Hancock	Irwin M. Bogarad	Weirton	Carlos L. Vasquez	Weirton	3rd Tues.
Harrison	Julian D. Gasatoyo	Lumberport	Reverdy H. Jones, Jr.	Clorksburg	1st Thurs.
Kanowha	George A. Shawkey	Charleston	Richard C. Rashid	So. Charleston	2nd Tues.
Logan	Jorge J. San Pedro	Mon	Enrico V. Rallos	Man	2nd Wed.
Marion	Robert G. Janes	Fairmont	Mary Jordon	Fairmont	Last Tues.
Marshall	Andrew J. Barger	Glen Dale	Michail Dolgovskij	Glen Dale	1st Tues.
Mason	Mork Cheng	Pt. Pleasont	Ismael O. Jamora	Pt. Pleosant	4th Tues.
McDowell	Romulo Miranda	Welch	A. A. Carr	Welch	2nd Wed.
Mercer	James P. Thomos	Bluefield	John J. Mahood	Bluefield	3rd Mon.
Mingo	Robert J. Tchou	Williamson	Duane A. Schram	Williamson	2nd Wed.
Monongalia	Herbert E. Warden	Morgantown	H. Summers Harrison	Morgantown	1st Tues.
Ohio	Alfred D. Ghaphery	Wheeling	Francis J. Gaydosh	Wheeling	4th Tues.
Parkersburg Academy	Frederick D. Gillespie	Parkersburg	R. C. Cowan, Jr.	Parkersburg	1st Thurs.
Potomac Valley	Esteban Friera	Romney	Dewey F. Bensenhaver	Petersburg	2nd Wed.
Preston	Wm. H. Harrimon, Jr.	Terra Alta	C. Y. Moser	Kingwood	4th Thurs.
Roleigh	Roy James Yates	Beckley	Wm. D. McLean	Beckley	3rd Thurs.
Summers	Buford W. McNeer	Hinton	E. L. Jimenez	Hinton	3rd Mon.
Tygart's Valley	Elvin G. Kreider	Philippi	A. Kyle Bush	Philippi	3rd Thurs.
Wetzel	Lemoyne Coffield	New Martinsville	C. P. Watson	New Martinsville	Monthly
Wyoming	Frank J. Zsoldos	Mullens	George F. Fordham	Mullens	Quarterly

Woman's Auxiliary

to the

WEST VIRGINIA STATE MEDICAL ASSOCIATION

President: Mrs. Robert R. Weiler, Wheeling
President Elect: Mrs. J. L. Mangus, Charleston
Vice President: Mrs. Charles E. Andrews, Morgantown
Eastern Regional Director: Mrs. David Z. Morgan, Morgantown
Northern Regional Director: Mrs. Harry S. Weeks, Jr., Wheeling
Western Regional Director: Mrs. Gary G. Gilbert, Huntington
Southern Regional Director: Mrs. T. Keith Edwards, Bluefield
Treasurer: Mrs. Louis W. Groves, Jr., Richwood
Recording Secretary: Mrs. D. Sheffer Clark, Huntington
Corresponding Secretary: Mrs. Robert J. Reed III, Triadelphia
Parliamentarian: Mrs. M. Bruce Martin, Huntington

McDOWELL

The May meeting of the Woman's Auxiliary to the McDowell County Medical Society was held at the home of Mrs. John S. Cook of Southwood.

The following new officers were installed by Mrs. Arthur A. Carr, a Past President: Mrs. John S. Cook, President; Mrs. Charles F. McCord, President Elect; Mrs. Robert Hansen, Second Vice President; Mrs. John H. Murry, Secretary; and Mrs. McCord, Treasurer.

Various plans were made for the coming year. A special feature for next year will be a brief talk at each meeting by the Auxiliary members from other countries acquainting the Auxiliary with their cultures and life-styles.

Mrs. Carr announced that West Virginia ranked first in the nation for AMA-ERF contributions, and reported that the McDowell Auxiliary had contributed $435.70 to the fund.

The Auxiliary has asked Miss Edith Hurley to review *The President's Wives* for the October or November meeting. It was decided to sponsor a teen-age dance in the fall as a fund-raising project for next year.

The Auxiliary voted to join the Humane Society as a group. Most of the members already belong to the Society.

OBITUARIES—continued

(Continued from Page xvi)

cago College of Medicine in 1916, Doctor Matney practiced medicine in the State for 55 years. He served the communities of Forest Hill, Mohawk and Iager before moving to Peterstown in 1933. He practiced there until 1972.

Doctor Matney was an honorary member of the Greenbrier Valley Medical Society, the West Virginia State Medical Association and the American Medical Association. He was a former member of the Monroe County Board of Education; and served in the West Virginia House of Delegates from 1951 through 1964.

BLUEFIELD SANITARIUM CLINIC

525 BLAND STREET

BLUEFIELD, W. VA.

ANESTHESIOLOGY
DAVID H. GATHERUM, M.D.

EMERGENCY SERVICE
S. K. CHOPRA, M.D.
B. P. BHASIN, M.D.

GASTROENTEROLOGY
LOUISE A. OWENS, M.D.

INTERNAL MEDICINE
H. F. WARDEN, M.D.
C. D. PRUETT, M.D.
R. O. ROGERS, M.D.

LABORATORY MEDICINE
DAVID F. BELL, JR., M.D.
JOHN J. BRYAN, M.D.

NEUROSURGERY
WILLIAM F. HILLIER, M.D.
E. L. GAGE, JR., M.D.
ADNAN SILK, M.D.

NUCLEAR MEDICINE
C. D. PRUETT, M.D.
R. O. ROGERS, M.D.

OB. & GYN.
CHARLES S. FLYNN, M.D.
T. KEITH EDWARDS, M.D.

OPHTHALMOLOGY
F. D. WHITE, M.D.

ORTHOPEDICS
EDWARD M. LITZ, M.D.

PEDIATRICS
GRADY McRAE, M.D.
E. M. SPENCER, M.D.

ROENTGENOLOGY
GEORGE C. KING, M.D.
JOHN A. ANZIULEWICZ, M.D.

THORACIC & VASCULAR SURGERY
ROBERT W. NEILSON, JR., M.D.
JAMES P. THOMAS, M.D.

UROLOGY
STEVE J. MISAK, M.D.

ADMINISTRATOR
JAMES L. FOSTER

THIRD-PARTY NEWS . . .

(Continued from Page xiv)

Once the data is collected from the specialty organizations, it will be evaluated by the committee coordinator and submitted to the Fund. A member of the Fund's staff will then be responsible for utilizing this data in designing a workable evaluation form and copies of the proposed form will be made available to the members.

The following physicians will be among coordinators and chairmen of these subcommittees:

Orthopedics: Dr. Tony C. Majestro, Dr. Robert Ghiz, Dr. Carl J. Roncaglione and Dr. Lawrance Miller;

Neurosurgery: Dr. Arthur L. Poffenbarger and Dr. Thomas J. Holbrook;

Plastic Surgery: Dr. Jacques Charbonniez and Dr. Gene L. Hackleman;

General Surgery: Dr. Walter E. Klingensmith;

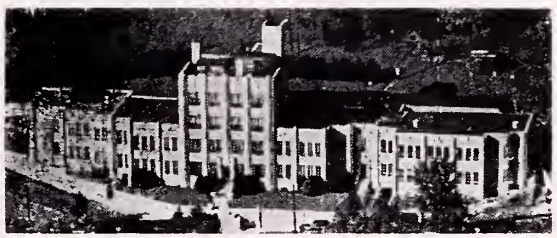
Cardiovascular Surgery: Dr. Robert L. Leadbetter;

Eyes, Ears, Nose and Throat: Dr. Robert E. O'Connor and Dr. Charles E. Haislip;

Urology: Dr. A. Thomas McCoy;

Internal: Dr. Harold Selinger and Dr. James T. Hughes;

Psychiatry: Dr. Florence Hoback and Dr. Ralph S. Smith, Jr.



Radiology:
Karl J. Myers, Sr., M. D.

Pathology:
Fulvio Franyutti, M. D.

Surgery:
Hu C. Myers, M. D.
A. Kyle Bush, M. D.
T. H. Chang, M. D.
J. W. Woodford, M. D.
A. Richard Weaver, M. D.

Gynecology and Obstetrics:
Raymond W. Cronlund, M. D.

Internal Medicine:
E. G. Guy, M. D.
B. G. Thimmappa, M. D.
Karl J. Myers, Jr., M. D.
Amitava Ghosal, M. D.

Pediatrics:
E. G. Kreider, M. D.
J. M. Nissley, M. D.

Dentistry:
Glenn B. Poling, D. D. S.

Family Practice:
Alan S. Petersan, M. D.

THE MYERS CLINIC
Philippi, West Virginia

The Eye and Ear Clinic of Charleston, Inc.

(A Thirty-five Bed Proprietary Hospital)

CHARLESTON, WEST VIRGINIA 25301
Phone: 1-(304)-343-4371

OPHTHALMOLOGY

Edwin M. Shepherd, M.D.
Diplomate, American Board of Ophthalmology

Milton J. Lilly, Jr. M.D.
Diplomate, American Board of Ophthalmology

Robert E. O'Connor, M.D.
Diplomate, American Board of Ophthalmology

Moseley H. Winkler, M.D.
Diplomate, American Board of Ophthalmology

Retinal Surgery
Fluorescein Angiography
Argon Laser Photocoagulation
Contact Lenses
Strontium 90 Beta Irradiation

OTOLOGY

William C Morgan, Jr., M.D.
Diplomate, American Board of Otolaryngology

OTOLARYNGOLOGY

Romeo Y. Lim, M.D.
Diplomate, American Board of Otolaryngology

Micro-surgery
Maxillo-facial Surgery
Reconstructive Surgery
Head & Neck Surgery
Cryosurgery
Endoscopy
Oncology

OPHTHALMOLOGY and OTOLARYNGOLOGY

John B. Haley, M.D.
John A. B. Holt, M.D.
Diplomate, American Board of Ophthalmology

Ancillary Services

Orthoptics
Visual Fields—Flow Studies
Laboratory
X-ray
Audiometry

Audiology

Nancy McClung, M.S.

Anesthesia

Catherine Kenney, CRNA
Inez Maggio, CRNA
Muriel Dodds, CRNA

THE WHEELING CLINIC

EOFF AT 16th STREET

WHEELING, WEST VIRGINIA

General Surgery:
J. O. Rankin, M. D.
C. D. Hershey, M. D.
E. C. Vass, M. D.

Ophthalmology:
W. F. Park, M. D.
M. E. Nugent, M. D.
R. V. Pangilinan, M. D.

Ear, Nose & Throat:
W. A. Tiu, M. D.
A. G. Matadar, M. D.
J. K. Tan, M. D.

Orthopedic Surgery:
E. L. Barrett, M. D.
R. S. Glass, M. D.

Thoracic Surgery:
Daniel W. Dickinson, M. D.

Obstetrics and Gynecology:
Robert W. Leibold, M. D.
Robert T. Brandfass, M. D.
A. Athari, M. D.
J. W. Campbell, M. D.

Urology:
D. C. Trapp, M. D.

Dermatology:
K. W. Watersan, M. D.
Sheldan Widlan, M. D.

Internal Medicine:
Charles H. Hiles, M. D.
Albert M. Valentine, M. D.
T. E. Chvasta, M. D.
B. L. Van Pelt, M. D.
P. R. Hedges, M. D.
C. L. Beall, M. D.
C. A. Vasquez, M. D.

Psychiatry:
Stephen D. Ward, M. D.
David Hill, M. D.
David H. Smith, M. D.

Neurology:
Albert L. Wanner, M. D.
Henry L. Kettler, M. D.

Roentgenology:
A. K. Butler, M. D.
J. N. Aceta, M. D.

Speech Pathologist and Audiologist:
James P. Frum, M. S.

Clinical Laboratories:
Danna Burlenski
Danna Bryan

Physician Assistants:
Joann Green, P. A.
Michael G. Siman, P. A.

Technologists:
Electracardiagraphy:
Betty Maguire, R. N.
Brenda Muklewicz, R. N.
Electraencephalagraphy:
Juanita Stane, R. N.
Raentgenalagy:
Evelyn Farester, R. T.

Administration:
Lester L. Cline, Manager
Henry L. Castilaw, Asst. Mgr.

NEW!
Welch Allyn
Halogen Diagnostic Set

- Twice the light intensity of conventional instruments
- Twice the life between lamp replacements
- Superior color fidelity—closer to natural sunlight
- Higher percentage of initial output throughout lamp life
- Distinctive black chrome rechargeable battery handles

WELCH ALLYN

WELCH ALLYN, INC.
Skaneateles Falls, N. Y. 13153

Ask for a demonstration.

HOSPITAL & PHYSICIANS SUPPLY CO.
511 BROOKS STREET 344-3554
CHARLESTON, WEST VIRGINIA

AUGUST
1976

Vol. 72 No. 8

The WEST VIRGINIA Medical Journal

Official Organ of the West Virginia State Medical Association

Box 1031 Charleston, W. Va. 25324

EDITOR
George F. Evans, M. D. (1981)
Clarksburg

MANAGING EDITOR AND BUSINESS MANAGER
Mr. Charles R. Lewis
Charleston

EXECUTIVE ASSISTANT
Mr. Custer B. Holliday
Charleston

ASSOCIATE EDITORS

E. J. Van Liere, M. D. (1976)
Morgantown

Stephen D. Ward, M. D. (1977)
Wheeling

John M. Hartman, M. D. (1978)
Charleston

Vernon E. Duckwall, M.D.(1979)
Elkins

Thomas J. Holbrook, M.D.(1980)
Huntington

Joe N. Jarrett, M. D. (1982)
Oak Hill

Published monthly by the West Virginia State Medical Association under the direction of the Publication Committee. Original articles are accepted on condition that they are contributed solely to The Journal.

Entered as second-class matter January 1, 1926, at the post office at Charleston, West Virginia, under the act of March 3, 1879.

Subscription Rates: $10 a year in the U.S.A.; $15 in foreign countries; $2 per single copy. Advertising rates furnished on request. Address all communications to Business Manager, The West Virginia Medical Journal, Box 1031, Charleston, West Virginia 25324. Phone 346-0551.

Microfilm editions beginning with the 1972 volume are available from University Microfilms, Inc., 300 N. Zeeb Road, Ann Arbor, Michigan 48106.

Member 1976

CONTENTS

Scientific Article
Pelvic Pneumogynecography—Fernando G. Giustini, M. D. . . . 197

Special Article
Scholarship In Medicine—Edmund B. Flink, M. D. . . . 205

Scientific Article
1976 Student Research Convocation, West Virginia University School of Medicine . . . 208

The President's Page
Reflections on The AMA in 'Big D'—Jack Leckie, M. D., President, W. Va. State Medical Association . . . 214

Editorials
A Year of Progress, But Much to be Done . . . 215
Intracranial Aneurysm, The Warning Evidence . . . 216

General News
Doctors Albright, Palmer Featured Speakers . . . 217
New Association Members . . . 222
Auxiliary To Hold 52nd Annual Meeting . . . 223
Kidney Foundation Organ Donation Effort . . . 224
Amendments To Constitution, Bylaws . . . 225
Dr. Richard V. Lynch, Jr., Honored . . . 226
Sports Activities At Annual Meeting . . . 227
Doctor Parks Wins Art Award . . . 228
WVU Resident AAFP Award Recipient . . . 228
Convention Program . . . 229
Convention Speakers . . . 232
A Word of Thanks . . . 234
1976 Program Committee . . . 235
Delegates and Alternates . . . 236
Auxiliary Program . . . 238
Scientific Exhibits . . . 240
Annual Reports . . . 243

Special Departments
WVU Medical Center News . . . x
Third-Party News, Views, Program Concerns . . . xii
Obituaries . . . xiv
County Societies . . . xvi
Classified Section . . . xxiii
Index To Advertisers . . . xxiv

respond to one

According to her major symptoms, she is a psychoneurotic patient with severe anxiety. But according to the description she gives of her feelings, part of the problem may sound like depression. This is because her problem, although primarily one of excessive anxiety, is often accompanied by depressive symptomatology. Valium (diazepam) can provide relief for both—as the excessive anxiety is relieved, the depressive symptoms associated with it are also often relieved.

There are other advantages in using Valium for the management of psychoneurotic anxiety with secondary depressive symptoms: the psychotherapeutic effect of Valium is pronounced and rapid. This means that improvement is usually apparent in the patient within a few days rather than in a week or two, although it may take longer in some patients. In addition, Valium (diazepam) is generally well tolerated; as with most CNS-acting agents, caution patients against hazardous occupations requiring complete mental alertness.

Also, because the psychoneurotic patient's symptoms are often intensified at bedtime, Valium can offer an additional benefit. An *h.s.* dose added to the *b.i.d.* or *t.i.d.* treatment regimen can relieve the excessive anxiety and associated depressive symptoms and thus encourage a more restful night's sleep.

Valium® (diazepam) IV

2-mg, 5-mg, 10-mg scored tablets

in psychoneurotic anxiety states with associated depressive symptoms

surveillance because of their predisposition to habituation and dependence. In pregnancy, lactation or women of childbearing age, weigh potential benefit against possible hazard.

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

ROCHE

Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

UPDATE 76

WHEELING CLINIC

Scientific Seminar in Medicine & Surgery

C. M. E. Credit in Category 1 by A. M. A. and 12 Hours Prescribed by American Academy of Family Physicians

October 8th and 9th, 1976
at beautiful
Oglebay Park, Wheeling, W. Va.

THE PROGRAM will offer a wide-ranging educational and clinical experience for the physician. NOON FRIDAY there will be a lecture on Family Practice followed by a general discussion of the use of Tranquilizers in Modern Medicine, and Diagnosis and Treatment of Pulmonary Disease. FRIDAY AFTERNOON will offer Workshops on topics including, Psychiatry-Neurology, Dermatology, and Surgery; with a Symposium on Antirheumatics. SATURDAY MORNING will offer such topics as, Hypertension Update, Dietary Practice for Surgical Patients, and Controversy in Birth Control. SATURDAY AFTERNOON the subject will be Internal Medicine—topics ranging from Breast Cancer to Hematologic Drug Reaction.

THE FACULTY WILL INCLUDE:

Frank Ayd, M. D., President American Psychiatric Assaciatian

Burt R. Meyers, M. D., Mt. Sinai School af Medicine, New Yark

Theadare H. King, M. D., Jahns Hapkins Haspital

Jahn W. Traubert, M. D., West Virginia University

Jahn H. Scatt, M. D., West Penn and Mercy Haspitals, Pittsburgh, Pa.

Anthany DiBartalamea, M. D., West Virginia University Medical Center

Richard C. Bazian, M. D., University af Cincinnati College af Medicine

THE REGISTRATION FEE of $50.00 for the entire conference will be charged all registrants and will include admission to luncheons, evening entertainment and dinners for the registronts and their wives on Friday and Soturday.

SPECIAL UPDATE '76 SPEAKER
NBC NEWS ANALYST
DAVID BRINKLEY

LADIES PROGRAM:

Friday: Tour the New Goad Zoo; Lunchean; Special Progrom at Mansion Museum Gallery ond visit to Garden Center in Oglebay. Then Cocktails, Dinner and Dance. **Saturday:** Luncheon ond Fashian Show, plus special activities for the children. Cocktail Party ond Update '76 Banquet. Also, Golf, Tennis, ond "free" time.

OVERNIGHT ACCOMMODATIONS:

Registronts ore responsible for their own lodging ond their chaice of hatel or motels. A block of rooms is ovailable on a first-come first-served basis at Wilson Lodge in Oglebay Park, and you may contact **Mr. Russ Band at 242-3000.**

Send Your Registration Today!

- - - Mail to: UPDATE '76 Committee of the Wheeling Clinic, Wheeling, W. Va. 26003 - - -

Please register me far the UPDATE '76 Seminar of the Wheeling Clinic, October 8th ond 9th. My registration fee of $50.00 is enclased. I understand the registration is limited ta 150 Physicians.

UPDATE 76
WHEELING CLINIC

Name_____ Specialty:_____
(Pleose Print)

Address_____ City_____ State_____

My wife_____will attend Phone:_____ Zip Code:_____
_____won't

WVU Medical Center
—News—

ONE faculty member and 19 students received honors recently at the West Virginia University School of Medicine's annual awards convocation.

The program recognizes faculty and student achievement through presentation of specific awards which have been established at the school by various donors.

Pedro Urquilla, M. D., Assistant Professor of Pharmacology, received the MacLachlan Award as the Basic Sciences faculty member chosen by the second-year students for "demonstrated unusual teaching ability and a sincere interest in the progress of the entire class." Provided by the School of Medicine Alumni Association, the award includes a personal desk plaque and entering of the recipient's name on an engraved wall plaque at WVU Medical Center.

By vote of his senior classmates, Malcolm Barrett Louden, Jr., of 2601 Elm Street, Parkersburg, received the Upjohn Award, consisting of $150 and an engraved plaque, for his "applied personal qualities, character and leadership." Louden also won the Edward G. Stuart Memorial Award as the graduating senior, chosen by a faculty committee, who "best exemplifies the qualities of empathy and understanding and strengthens his competency with compassion." The Stuart Award includes an inscribed desk clock, $25 and addition of the winner's name to a permanent plaque at the Medical Center. Louden was President this year of the WVU chapter of Alpha Omega Alpha honor medical society.

Malcolm B. Louden, Jr.

Dual honors also went to first-year student Samuel M. Mahaffey of 3557 Collins Ferry Road, Morgantown. Mahaffey won a Lange Book Award for scholastic achievement and the Lindsay Memorial Award of $100 for outstanding performance in medical physiology.

Receiving E. J. VanLiere Awards of $100 each and engraved gold medals for making the Student Research Convocation presentations judged most excellent by a faculty committee were James C. Jarrell, a second-year student, of 409 Crooks Avenue, Ravenswood; and Keith D. Stottlemyer, a senior from Sharpsville, Pennsylvania. Second-year student Ellen S. Shaw, of 925 Traction Park, Monongah, received $50 and second place for her research. Second-year student Frank L. Swartz, of 2804 29th Street, Parkersburg, received $25 and third place for his research presentation.

James C. Jarrell

The CIBA Award for outstanding community service by a member of the second-year class went to Joseph C. Franz of Rt. 3, Box 14, Bridgeport. Franz, immediate Past-President of the WVU chapter of the American Student Medical Association and now a regional trustee of the organization, received a set of Netter Atlas volumes.

Joseph C. Franz

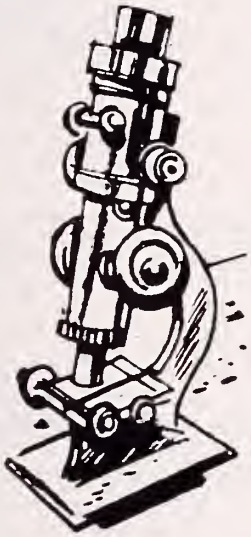
Winner of the Anido Award for outstanding academic achievement in laboratory medicine by a second-year student was Sheila Joan Walkup of Box 697, Leslie (Greenbrier County).

Recipients of American Medical Women's Association Scholarship Achievement Citations were graduating seniors Diane J. Camp of Rochester, Pennsylvania; Mary Carroll Shemo of Silver Spring, Maryland, and Margaret Louise Simpson of Las Cruces, New Mexico.

Other Lange Book Award scholars were first-year student Mickey J. Neal of 108 North Walnut Street, Philippi; and second-year students Thomas L. Warren, of 1219 Pineview Drive, Morgantown,

(Continued on Page xvi)

• Compiled from material furnished by Mrs. Mary Ellin Wylie, Director, Medical Center News and Information Services, Morgantown, W. Va.



Morgantown Medical Laboratory

596 Willey Street, Morgantown, WV 26505

Phone: (304) 292-3313

Lawrence F. Martin, M.D., Director

Phillip Cohen, M. D., Medical Director

John A Jupin, M.D., Pathologist

Reference services offered in:

Bacteriology
Parasitology
Serology
Chemistry
Hematology
Immunohematology
Diagnostic Cytology
Radiobioassay
Pathology

Specimen Containers, Mailers and Fee Schedules promptly forwarded upon request

Third-Party News, Views and Program Concerns

• Prepared by state government agencies involved in health care, and other third-party organizations.

After Ten Years Of Medicare: Better Planning, Use Of Assets Needed

Ten years of Medicare have demonstrated that the government and the private sector can work together in health care financing programs, but the decade of experience also shows that long-range planning and better use of existing management resources should be incorporated into any similar Federal effort in the future, according to William E. Ryan, President of the National Association of Blue Shield Plans.

Medicare went into effect on July 1, 1966.

Ryan said Medicare's ten-year mark should be a time to evaluate the program, to look hard at its shortcomings as well as its successes.

"It is essential that whenever we embark on a social program as massive as Medicare, we continually review it to make sure that what we begin as a humanitarian effort continues to serve those it is intended to benefit," said Ryan.

He pointed out that the 32 Blue Shield Plans that administer Medicare Part B for nearly 60 per cent of all Medicare recipients have ongoing internal reviews to help them better meet their responsibilities.

"While effective from a management standpoint," Ryan said, "such reviews can't deal with fundamental flaws in the program. And after a decade, some of those fundamental flaws remain."

Ryan said two important lessons should be learned from the Medicare experience.

"First, it was apparent from the early years of Medicare that insufficient planning time was allowed for its implementation. We knew that then, and we are still seeing the results of that haste. Neither the Federal government, nor the private carriers who were asked to administer Medicare, had experience in running an insurance program that comprehensive or with that degree of complexity."

He recalled that only 11 months elapsed between the time Medicare was signed into law and the time it became effective on July 1, 1966. Private carriers to administer Part B weren't selected by the Social Security Administration until the late winter of 1966, only four months before they assumed responsibility for processing Medicare claims.

"Most of the present criticism of Medicare is centered on its cost," said Ryan. "Some estimates put the present cost to the Federal government at twice what was anticipated in 1966. At the same time, Medicare recipients are today spending more money from their own pockets for routine care than they did 10 years ago.

"This isn't so much the fault of the program's operation as it is the unrealistic expectations of those who conceived it. Frankly, too little thought was given to the impact of Medicare on health costs. Even though inflation has affected health care more than anyone expected, the long-range economics of Medicare weren't sufficiently examined during the short lead time allowed to implement the program."

Ryan said the second lesson that Medicare should teach is reliance on existing assets to make such a program work.

Restrictions Hamper Private Carriers

"Private carriers have been part of Medicare from the beginning," he said, "but they haven't been used as well by the Federal government as they could have been. Restrictions have been enacted that prevent them from taking the cost-effective tools they have devised to serve their private subscribers and adapting them to the administration of Medicare claims."

Specifically, he mentioned government regulations that limit carriers' prerogatives on subcontracting, that attempt to determine fees for specific medical services such as kidney dialysis, and that intrude in the policy decisions of carriers.

"Almost two years ago, the Department of Health, Education and Welfare's Advisory Committee on Medicare Administration, after months of study, recommended that the government should reduce its role in carrier policymaking and concentrate on testing performance," said Ryan. "Mutual efforts are under way to explore ways to accomplish this."

Ryan said over-control could choke off carriers' ability to improve Medicare service and implement effective programs to hold down the costs.

He concluded: "The relationship between government and private carriers ought to be complementary. In many ways, it is. But as we plan for the second decade of Medicare, we should reinforce that relationship—make it a better relationship—by avoiding some of the mistakes of the first 10 years."

GROUP INSURANCE

Officially sponsored by

WEST VIRGINIA STATE MEDICAL ASSOCIATION

SOUND PROTECTION

at a

SUBSTANTIAL SAVING IN COST

Please Send Me Descriptive Brochure On—

☐ **LONG TERM DISABILITY INCOME PROTECTION**
(Pays you a regular monthly benefit up to $2,000 per month when you are disabled)

☐ **$15,000 MAJOR HOSPITAL PLAN**
Covers you and your fomily up to $15,000 per person

☐ **LOW-COST LIFE INSURANCE**
In units of — $10,000 - $20,000 - $30,000 - $40,000 - $50,000

☐ **$100,000 ACCIDENTAL DEATH & DISMEMBERMENT INSURANCE**
Around the clock protection — 24 hours a day . . . 365 days o year . . . world wide

☐ **OFFICE OVERHEAD DISABILITY POLICY**
(Poys your office expense up to $3,500 per mo. while you are disabled)

☐ **A MUTUAL FUND PROGRAM**
Designed to qualify under HR-10

☐ **A MILLION DOLLAR CATASTROPHE LIABILITY POLICY**
(Covers: Malpractice—Home—Personal—Auto Liability)

Name _____ Address _____

MAIL TO: ADMINISTRATOR
McDONOUGH-CAPERTON-SHEPHERD-GOLDSMITH
P. O. BOX 1551 CHARLESTON, W. VA. (25326)

NOTE: A full time service representative travels the State and is always available for personal consultation. Your Resident Administrator provides complete service here in the State including processing and payment of claims.

Obituaries

WALTER W. POINT, M. D.

Dr. Walter W. Point of Charleston, retired obstetrician and gynecologist, died on June 16 in a hospital there. He was 88.

A native of Huntington, Doctor Point was graduated from West Virginia University and received his M. D. degree in 1913 from the College of Physicians and Surgeons of Baltimore.

Doctor Point was a Past President and Secretary of the Kanawha Medical Society. A veteran of World War I, he retired in 1967. He had served as President of the Charleston Rose Society four times.

He was an honorary member of the Kanawha Medical Society, the West Virginia State Medical Association and the American Medical Association.

Surviving are two sons, Dr. W. Warren Point III of Belmont, Massachusetts and Dr. Robert B. Point of Bethesda, Maryland; and a sister, Mrs. Edgar B. Allen of Zanesville, Ohio.

* * *

LOWELL W. SCHWAB, M. D.

Dr. Lowell W. Schwab, formerly of Kingwood, was found dead on May 19 on the Maryland side of the Potomac River near Washington, D. C. He was 41.

An obstetrician and gynecologist, Doctor Schwab was graduated from West Virginia University and received his M. D. degree in 1960 from the Medical College of Virginia.

A resident of Arlington, Virginia, he had had offices in Virginia, Maryland and the District of Columbia since 1966.

His automobile had been found early on May 18 near the Woodroe Wilson Bridge leading from Maryland to Virginia.

Doctor Schwab was active in WVU alumni affairs, having served as President of the Alumni Association's National Capital Chapter.

Survivors include the widow; two brothers, Dr. Larry Schwab of Morgantown and Dr. Ivan Schwab of San Francisco; and the parents, J. Wayne and Helen Schwab of Kingwood.

* * *

PHILIP AZAR, M. D.

Dr. Philip Azar, formerly of Wheeling, died on May 11 in Beallville, Illinois. He was 59. A native of New Martinsville, Doctor Azar was graduated from West Virginia University and received his M. D. degree in 1943 from St. Louis University School of Medicine.

He was a former member of the Ohio County Medical Society and the West Virginia State Medical Association.

Surviving are the widow, three sons and four daughters.

General and Thoracic Surgery
Stephen T. J. Lee, M. D.
James A. Gardner, M. D.

Orthopedics
Clifford A. Stevenson, M. D.
S. A. Zahir, M. D.
Mario C. Ramas, M. D.
George Orphanos, M. D.

Obstetrics-Gynecology
A. Ray Jacobson, M. D.
Mariamma Abraham, M. D.

Ophthalmology
Edward T. Liu, M. D.

Urology
S. L. Francis, M. D.

Southern West Virginia Clinic

Stanaford Road, P. O. Box 50
Beckley, West Virginia 25801
Phone (304) 252-7331

Internal Medicine
Preston C. Davis, M. D.
Joseph A. Maiolo, M. D.
Eugene Warvariv, M. D.
R. James Yates, M. D.
S. L. Bembalkar, M. D.

Pediatrics
P. B. Gogo, M. D.
Raquel S. Israel, M. D.

Radiology
Thomas L. Martin, M. D.

Clinic Manager
James P. Bland

WESLEY F. DORSEY, M. D.

Dr. Wesley F. Dorsey of Knoxville, Tennessee, a native of West Virginia, died on June 5 in a Knoxville hospital. He was 83.

Born at Mount Nebo, in Nicholas County, Doctor Dorsey attended West Virginia University, where he played varsity basketball and baseball. He was graduated from Marshall University and received his M. D. degree in 1923 from the University of Cincinnati College of Medicine.

Survivors include the widow; a daughter, Mrs. Hugh Hixon, and a son, Dr. Larry Dorsey, both of Knoxville; two sisters, Mrs. Ida Parsons and Miss Esta Jane Dorsey, both of Charleston; and three brothers, Urban Dorsey of Mount Nebo; Warren Dorsey, Hunkens, Pennsylvania; and W. O. Dorsey, Chippewa Falls, Wisconsin.

* * *

NOEL F. COULON, M. D.

Dr. Noel F. Coulon of Bluefield died on June 6 in a hospital there. He was 86. A native of Manchester, New Hampshire, he received his M. D. degree in 1919 from the University of Maryland School of Medicine.

Doctor Coulon first practiced at Cabin Creek and Dawes, moving to Gary in 1922. He practiced in Gary until his retirement in 1974.

A veteran of World War I, he was an honorary member of the McDowell County Medical Society, the West Virginia State Medical Association and the American Medical Association.

Survivors include the widow; two daughters, Miss Mary Adele Coulon of Baltimore and Mrs. Joseph M. Gritcher, Prince George, Virginia; two sons, Philip S. Coulon, Gary, and Henry B. Coulin, Maitland, Florida; four stepdaughters, Mrs. R. J. Kirkwood, Odenton, Maryland; Mrs. J. R. Harman, Bluefield; Mrs. Thomas Bentz, Wheeling, and Mrs. Harry Fischer, Westerville, Ohio; and one stepson, Walter J. Kearns, Bluefield.

Gilbert Ramirez, recently elected Justice of the Supreme Court of the State of New York, Kings County. Justice Ramirez is blind.

The President's Committee on Employment of the Handicapped
Washington, D.C. 20210

School of Visual Arts Public Advertising System

Free supplies before September 1.

FREE LECTRO-PADS, PAPER, AND MOUNTS —ENOUGH FOR 100 ECGs—WHEN YOU ORDER A NEW BURDICK EK/5A ELECTRO-CARDIOGRAPH BETWEEN NOW AND SEPTEMBER 1, 1976.

EK-5A paid for after 100 ECGs.

When you've used these free supplies, your EK-5A will have paid for itself.

BURDICK'S EK/5A CARDIOGRAPH —NOW WITH NEW PATIENT ISOLATION

—and unique automatic lead marking

The Burdick EK-5A is an instant-on solid-state electrocardiograph with a coveted reputation for accuracy, definition and dependability. It exceeds the minimum American Heart Association frequency-response recommendations, is Data-Phone compatible, and is backed by our there-when-you-need-us dealer service

This free-supplies offer, which makes it easy for you to own a Burdick EK-5A free and clear, is limited. Act now, before the September 1st deadline.

General Medical WEST VIRGINIA

2400 — FOURTH AVE.

HUNTINGTON, WEST VIRGINIA

County Societies

CABELL

The Cabell County Medical Society met on June 10 at the Gateway Inn in Huntington. Dr. Ruth Harris, Chairman of the Department of Pediatrics, Marshall University School of Medicine, was the honor guest for the evening.

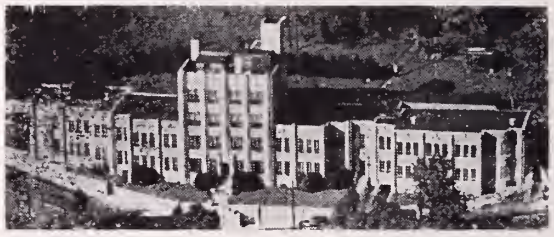
Two other guests introduced were Dr. Frank Ghidoni, who recently was appointed Director of the Cabell Huntington Hospital Emergency Department, and Joe David, son of Dr. Kirk J. David of Huntington, who has completed his first year at the West Virginia University School of Medicine.—Colin M. Craythorne, M. D., Secretary.

WVU MEDICAL CENTER NEWS . . .

(Continued from Page x)

and Richard Spurlock of 123 Belford Avenue, Huntington.

Second-year students who won Mosby Book Awards for scholastic achievement were Stephen P. Cassis of 4701 Venable Avenue and George E. Pritt II of 1230 Paula Road, Charleston; Joseph M. Neal of 524 Ridegewood Road, Huntington; Patricia R. Evans of 421 Seventh Street, Glen Dale; and Charles J. Singer of 48 North 22nd Street, Wheeling.



Radiology:
Karl J. Myers, Sr., M. D.

Pathology:
Fulvio Franyutti, M. D.

Surgery:
Hu C. Myers, M. D.
A. Kyle Bush, M. D.
T. H. Chang, M. D.
J. W. Woodford, M. D.
A. Richard Weaver, M. D.

Gynecology and Obstetrics:
Raymond W. Cronlund, M. D.

Internal Medicine:
E. G. Guy, M. D.
B. G. Thimmappa, M. D.
Karl J. Myers, Jr., M. D.
Amitava Ghosal, M. D.

Pediatrics:
E. G. Kreider, M. D.
J. M. Nissley, M. D.

Dentistry:
Glenn B. Poling, D. D. S.

Family Practice:
Alan S. Peterson, M. D.

THE MYERS CLINIC
Philippi, West Virginia

BLUEFIELD SANITARIUM CLINIC
525 BLAND STREET
BLUEFIELD, W. VA.

ANESTHESIOLOGY
DAVID H. GATHERUM, M.D.

EMERGENCY SERVICE
S. K. CHOPRA, M.D.
B. P. BHASIN, M.D.

GASTROENTEROLOGY
LOUISE A. OWENS, M.D.

INTERNAL MEDICINE
H. F. WARDEN, M.D.
C. D. PRUETT, M.D.
R. O. ROGERS, M.D.

LABORATORY MEDICINE
DAVID F. BELL, JR., M.D.
JOHN J. BRYAN, M.D.

NEUROSURGERY
WILLIAM F. HILLIER, M.D.
E. L. GAGE, JR., M.D.
ADNAN SILK, M.D.

NUCLEAR MEDICINE
C. D. PRUETT, M.D.
R. O. ROGERS, M.D.

OB. & GYN.
CHARLES S. FLYNN, M.D.
T. KEITH EDWARDS, M.D.

OPHTHALMOLOGY
F. D. WHITE, M.D.

ORTHOPEDICS
EDWARD M. LITZ, M.D.

PEDIATRICS
GRADY McRAE, M.D.
E. M. SPENCER, M.D.

ROENTGENOLOGY
GEORGE C. KING, M.D.
JOHN A. ANZIULEWICZ, M.D.

THORACIC & VASCULAR SURGERY
ROBERT W. NEILSON, JR., M.D.
JAMES P. THOMAS, M.D.

UROLOGY
STEVE J. MISAK, M.D.

ADMINISTRATOR
JAMES L. FOSTER

OFFICERS OF COMPONENT SOCIETIES

Society	President		Secretary		Meetings
Boone	Prabhand Chinuntdet	Madison	Harold H. Hawell	Madisan	3rd Wed.
Braake	R. L. Velarde	Fallansbee	James E. Wise	Follansbee	
Cabell	Chas. H. McKown, Jr.	Huntington	Calin M. Craytharne	Huntington	2nd Thurs.
Central West Virginia	I. Frank Hartman, II	Buckhannan	Joseph B. Reed	Buckhannon	As Sched.
Eastern Panhandle	Hiram Sizemore, Jr.	Shepherdstown	Everett S. Fagle	Martinsburg	2nd Wed.
Fayette	Jae N. Jarrett	Oak Hill	Carl R. Adkins	Fayetteville	1st Wed.
Greenbrier Valley	Herbert L. Pape	White Sul. Spgs.	T. O. Dotsan	White Sul. Spgs.	2nd Wed.
Hancack	Irwin M. Bagarad	Weirton	Carlos L. Vasquez	Weirtan	3rd Tues.
Harrison	Julian D. Gasataya	Lumberport	Reverdy H. Jones, Jr.	Clarksburg	1st Thurs.
Kanawha	George A. Shawkey	Charlestan	Richard C. Rashid	Sa. Charleston	2nd Tues.
Lagan	Jarge J. San Pedro	Man	Enrica V. Rallas	Man	2nd Wed.
Marion	Robert G. Janes	Fairmont	Mary Jordan	Fairmont	Last Tues.
Marshall	Andrew J. Barger	Glen Dale	Michail Dalgavskij	Glen Dale	1st Tues.
Mason	Mark Cheng	Pt. Pleasant	Ismael O. Jamara	Pt. Pleasant	4th Tues.
McDawell	Ramulo Miranda	Welch	A. A. Carr	Welch	2nd Wed.
Mercer	James P. Thomas	Bluefield	Jahn J. Mahaad	Bluefield	3rd Mon.
Minga	Rabert J. Tchau	Williamson	Duane A. Schram	Williamson	2nd Wed.
Manongalia	Herbert E. Warden	Margantawn	H. Summers Harrisan	Margantown	1st Tues.
Ohio	Alfred D. Ghaphery	Wheeling	Francis J. Gaydosh	Wheeling	4th Tues.
Parkersburg Academy	Frederick D. Gillespie	Parkersburg	R. C. Cowan, Jr.	Parkersburg	1st Thurs.
Potomac Valley	Esteban Friera	Ramney	Dewey F. Bensenhaver	Petersburg	2nd Wed.
Preston	Wm. H. Harriman, Jr.	Terra Alta	C. Y. Moser	Kingwood	4th Thurs.
Raleigh	Ray James Yates	Beckley	Wm. D. McLean	Beckley	3rd Thurs.
Summers	Buford W. McNeer	Hinton	E. L. Jimenez	Hintan	3rd Mon.
Tygart's Valley	Elvin G. Kreider	Philippi	A. Kyle Bush	Philippi	3rd Thurs.
Wetzel	Lemayne Coffield	New Martinsville	C. P. Watsan	New Martinsville	Monthly
Wyaming	Frank J. Zsoldos	Mullens	George F. Fardham	Mullens	Quarterly

The Eye and Ear Clinic of Charleston, Inc.

(A Thirty-five Bed Proprietary Hospital)

CHARLESTON, WEST VIRGINIA 25301
Phone: 1-(304)-343-4371

OPHTHALMOLOGY

Edwin M. Shepherd, M.D.
Diplomate, American Board of Ophthalmology

Milton J. Lilly, Jr. M.D.
Diplomate, American Board of Ophthalmology

Robert E. O'Connor, M.D.
Diplomate, American Board of Ophthalmology

Moseley H. Winkler, M.D.
Diplomate, American Board of Ophthalmology

Retinal Surgery
Fluorescein Angiography
Argon Laser Photocoagulation
Contact Lenses
Strontium 90 Beta Irradiation

OTOLOGY

William C Morgan, Jr., M.D.
Diplomate, American Board of Otolaryngology

OTOLARYNGOLOGY

Romeo Y. Lim, M.D.
Diplomate, American Board of Otolaryngology

Micro-surgery
Maxillo-facial Surgery
Reconstructive Surgery
Head & Neck Surgery
Cryosurgery
Endoscopy
Oncology

OPHTHALMOLOGY and OTOLARYNGOLOGY

John B. Haley, M.D.
John A. B. Holt, M.D.
Diplomate, American Board of Ophthalmology

Ancillary Services

Orthoptics
Visual Fields—Flow Studies
Laboratory
X-ray
Audiometry

Audiology

Nancy McClung, M.S.

Anesthesia

Catherine Kenney, CRNA
Inez Maggio, CRNA
Muriel Dodds, CRNA

THE WHEELING CLINIC

EOFF AT 16th STREET

WHEELING, WEST VIRGINIA

General Surgery:
J. O. Rankin, M. D.
C. D. Hershey, M. D.
E. C. Vass, M. D.

Ophthalmology:
W. F. Park, M. D.
M. E. Nugent, M. D.
R. V. Pangilinan, M. D.

Ear, Nose & Throat:
W. A. Tiu, M. D.
A. G. Matadar, M. D.
J. K. Tan, M. D.

Orthopedic Surgery:
E. L. Barrett, M. D.
R. S. Glass, M. D.

Thoracic Surgery:
Daniel W. Dickinson, M. D.

Obstetrics and Gynecology:
Robert W. Leibald, M. D.
Robert T. Brandfass, M. D.
A. Athari, M. D.
J. W. Campbell, M. D.

Urology:
D. C. Trapp, M. D.

Dermatology:
K. W. Waterson, M. D.
Sheldon Widlan, M. D.

Internal Medicine:
Charles H. Hiles, M. D.
Albert M. Valentine, M. D.
T. E. Chvasta, M. D.
B. L. Van Pelt, M. D.
P. R. Hedges, M. D.
C. L. Beall, M. D.
C. A. Vasquez, M. D.

Psychiatry:
Stephen D. Ward, M. D.
David Hill, M. D.
David H. Smith, M. D.

Neurology:
Albert L. Wanner, M. D.
Henry L. Kettler, M. D.

Roentgenology:
Drs. Butler, Aceta & Assocs.

Speech Pathologist and Audiologist:
James P. Frum, M. S.

Clinical Laboratories:
Donna Burlenski
Donna Bryan

Physician Assistants:
Joann Green, P. A.
Michael G. Simon, P. A.

Technologists:
Electrocardiography:
Betty Maguire, R. N.
Brenda Muklewicz, R. N.
Electroencephalography:
Juanita Stone, R. N.
Roentgenology:
Evelyn Forester, R. T.

Administration:
Lester L. Cline, Manager
Henry L. Castilow, Asst. Mgr.

NEW!
Welch Allyn
Halogen Diagnostic Set

- Twice the light intensity of conventional instruments
- Twice the life between lamp replacements
- Superior color fidelity—closer to natural sunlight
- Higher percentage of initial output throughout lamp life
- Distinctive black chrome rechargeable battery handles

WELCH ALLYN
WELCH ALLYN, INC.
Skaneateles Falls, N. Y. 13153

Ask for a demonstration.

HOSPITAL & PHYSICIANS SUPPLY CO.
511 BROOKS STREET **344-3554**
CHARLESTON, WEST VIRGINIA

SEPTEMBER
1976

Vol. 72 No. 9

The WEST VIRGINIA Medical Journal

Official Organ of the West Virginia State Medical Association

Box 1031 Charleston, W. Va. 25324

EDITOR
George F. Evans, M. D. (1981)
Clarksburg

MANAGING EDITOR AND BUSINESS MANAGER
Mr. Charles R. Lewis
Charleston

EXECUTIVE ASSISTANT
Mr. Custer B. Hollidoy
Charleston

ASSOCIATE EDITORS

E. J. Von Liere, M. D. (1976)
Morgantown

Stephen D. Word, M. D. (1977)
Wheeling

John M. Hortman, M. D. (1978)
Charleston

Vernon E. Duckwoll, M.D.(1979)
Elkins

Thomas J. Holbrook, M.D.(1980)
Huntington

Joe N. Jarrett, M. D. (1982)
Oak Hill

Published monthly by the West Virginia State Medical Association under the direction of the Publication Committee. Original articles are accepted on condition that they are contributed solely to The Journal.

Entered as second-class matter January 1, 1926, at the post office at Charleston, West Virginia, under the act of March 3, 1879.

Subscription Rates: $10 a year in the U.S.A.; $15 in foreign countries; $2 per single copy. Advertising rates furnished on request. Address all communications to Business Manager, The West Virginia Medical Journal, Box 1031, Charleston, West Virginia 25324. Phone 346-0551.

Microfilm editions beginning with the 1972 volume are available from University Microfilms, Inc., 300 N. Zeeb Road, Ann Arbor, Michigan 48106.

Member 1976

CONTENTS

Scientific Articles

A Current Concept of the Pathophysiology of the Hyperglycemia of Diabetes Mellitus—Thomas G. Skillman, M. D. 247

Mixed Primary Bronchogenic Carcinoma Presenting As A Solitary Pulmonary Nodule—Edwin C. James, M. D.; and William A. Meriwether, M. D. 251

Scientific Department

Medical Grand Rounds from the West Virginia University Medical Center (Small Cell (Oat Cell) Undifferentiated Lung Carcinoma) — Edited by Raymond B. Weiss, M. D. 254

The President's Page

Physician, Be a Good Citizen!—John J. Mahood, M. D., President, W. Va. State Medical Association 264

Editorials

Talmadge Medicare-Medicaid Reforms Miss Target 265
Regulatory Agencies' Power Should Be Controlled 265
Health Planning Act A Gigantic Danger 266

General News

Tenth Mid-Winter Clinical Conference 267
Urology Seminar Program Announced 267
Maryland Medical Staff Conference 268
Wheeling Clinic Seminar Program 268
EMS Hospital Categorization Prototype 270
Heart Association Meeting at Pipestem 271
Dr. Robert W. Coon Named Marshall Dean 272
Hal Wanger Family Practice Conference 272
New Class at WVU School of Medicine 273
Continuing Education Activities 274

Special Departments

WVU Medical Center News x
Third-Party News, Views, Program Concerns xii
Obituaries xiv
Classified Section xxi
Index to Advertisers xxii

respond to one

According to her major symptoms, she is a psychoneurotic patient with severe anxiety. But according to the description she gives of her feelings, part of the problem may sound like depression. This is because her problem, although primarily one of excessive anxiety, is often accompanied by depressive symptomatology. Valium (diazepam) can provide relief for both—as the excessive anxiety is relieved, the depressive symptoms associated with it are also often relieved.

There are other advantages in using Valium for the management of psychoneurotic anxiety with secondary depressive symptoms: the psychotherapeutic effect of Valium is pronounced and rapid. This means that improvement is usually apparent in the patient within a few days rather than in a week or two, although it may take longer in some patients. In addition, Valium (diazepam) is generally well tolerated; as with most CNS-acting agents, caution patients against hazardous occupations requiring complete mental alertness.

Also, because the psychoneurotic patient's symptoms are often intensified at bedtime, Valium can offer an additional benefit. An *h.s.* dose added to the *b.i.d.* or *t.i.d.* treatment regimen can relieve the excessive anxiety and associated depressive symptoms and thus encourage a more restful night's sleep.

Valium® (diazepam) Ⓘⓥ

2-mg, 5-mg, 10-mg scored tablets

in psychoneurotic anxiety states with associated depressive symptoms

surveillance because of their predisposition to habituation and dependence. In pregnancy, lactation or women of childbearing age, weigh potential benefit against possible hazard.

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

ROCHE

Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

UPDATE 76 WHEELING CLINIC

Scientific Seminar in Medicine & Surgery

C. M. E. Credit in Category 1 by A. M. A. and 12 Hours Prescribed by American Academy of Family Physicians

October 8th and 9th, 1976
at beautiful
Oglebay Park, Wheeling, W. Va.

THE PROGRAM will offer a wide-ranging educational and clinical experience for the physician. NOON FRIDAY there will be a lecture on Family Practice followed by a general discussion of the use of Tranquilizers in Modern Medicine, Diagnosis and Treatment of Pulmonary Disease and Radiation Therapy. FRIDAY AFTERNOON will offer Workshops on topics including, Psychiatry-Neurology, Dermatology, and Surgery; with a Symposium on Hypertension. SATURDAY MORNING will offer such topics as, Dietary Practice for Surgical Patients, and Controversy in Birth Control. SATURDAY AFTERNOON the subject will be Internal Medicine—topics ranging from Breast Cancer to Hematologic Drug Reaction.

THE FACULTY WILL INCLUDE:

Frank J. Ayd, M. D., Taylor Manor Hospital, Baltimore, Md.

Burt R. Meyers, M. D., Mt. Sinai School of Medicine, New York

Theodore M. King, M. D., Johns Hopkins Hospital

John W. Traubert, M. D., West Virginia University

William N. Spellacy, M. D., University of Florida

James R. Oster, M. D., Miami VA Hospital

John H. Scott, M. D., West Penn and Mercy Hospitals, Pittsburgh, Pa.

Anthony DiBartolameo, M. D., West Virginia University Medical Center

Richard C. Bozian, M. D., University of Cincinnati College of Medicine

David T. Lowenthal, M. D., Hahnemann Medical College and Hospital, Philadelphia, Pa.

Bruce J. Walz, M. D., Washington University, St. Louis, Mo.

THE REGISTRATION FEE of $50.00 for the entire conference will be charged all registrants and will include admission to luncheons, evening entertainment and dinners for the registrants and their wives on Friday and Saturday.

SPECIAL UPDATE '76 SPEAKER
NBC NEWS ANALYST
DAVID BRINKLEY

LADIES PROGRAM:

Friday: Preview of the Good Zoo; Luncheon; Special Program at Mansion Museum Gallery and visit to Garden Center in Oglebay. Then Cocktails, Dinner and Dance. **Saturday:** Luncheon and Fashion Show, plus special activities for the children. Cocktail Party and Update '76 Banquet. Also, Golf, Tennis, and "free" time.

OVERNIGHT ACCOMMODATIONS:

Registrants are responsible for their own lodging and their choice of hotel or motels. A block of rooms is available on a first-come first-served basis at Wilson Lodge in Oglebay Park, and you may contact **Mr. Russ Band at 242-3000.**

Send Your Registration Today!

- - - Mail to: UPDATE '76 Committee of the Wheeling Clinic, Wheeling, W. Va. 26003 - - -

Please register me for the UPDATE '76 Seminar of the Wheeling Clinic, October 8th and 9th. My registration fee of $50.00 is enclosed. I understand the registration is limited to 150 Physicians.

UPDATE 76 WHEELING CLINIC

Name_____ Specialty:_____
(Please Print)

Address_____ City_____ State_____

My wife_____will attend Phone:_____ Zip Code:_____
_____won't

WVU Medical Center
—News—

A former faculty member of the University of Ottawa in Canada has been named Professor and Chairman, Department of Community Medicine, West Virginia University School of Medicine.

Dr. Richard J. C. Pearson, who was born in Birmingham, England, received his bachelor's and medical degrees from Cambridge University and was a resident in pediatrics at Yale-New Haven Hospital and at Louisville (Ky.) Children's Hospital.

He holds a Master of Public Health degree from Yale University and has also served on the faculty of that institution as well as the teaching and clinical staffs of the University of Manchester in England and Brown University.

Richard J. C. Pearson, M. D.

Before coming to WVU, he was Associate Professor in the Department of Epidemiology and Community Medicine at the University of Ottawa and was Chief of General Practice at the Royal Ottawa Hospital for Special Rehabilitation.

A member of the Canadian Association of Teachers of Social and Preventive Medicine, the British Society for Social Medicine and the Ottawa Academy of Medicine, he has served with both Canadian and international organizations, committees and panels as a consultant in community and health care planning.

His extensive studies of international health power utilization have been detailed in a number of publications, including *Lancet*, the British medical journal, and *The New England Journal of Medicine*.

Neurosurgeon Joins Staff

Ralph O. Dunker, M. D., has joined the WVU faculty as an Assistant Professor in the Division of Neurosurgery, Department of Surgery.

Doctor Dunker received his A. B. degree from Cornell University and his M. D. from Ohio State University. He served his residency in neurosurgery at the University of Washington in Seattle.

Doctor Dunker is the author of several articles describing research in his specialty.

• **Compiled from material furnished by Mrs. Mary Ellin Wylie, Director, Medical Center News and Information Services, Morgantown, W. Va.**

Emergency Communication Expanded

Modern emergency medicine entails more than getting the accident victim or seriously ill patient to the hospital in the shortest time possible.

A Medical Control System, such as that now being implemented in West Virginia, involves not only transportation of emergency cases, but requires coordination of all inter-hospital transfers for critical care cases. Such a system must have command of ambulances—deciding where the patient can be taken in the shortest period of time to receive optimal care. It must direct medical monitoring and treatment of that patient while enroute to the hospital.

A reliable, far-reaching and constant communication network is as vital to such a system as well-equipped ambulances and trained medical and paramedical personnel.

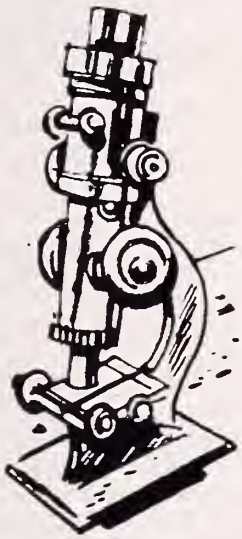
As the Medical Control Point for the northern part of the State, West Virginia University Hospital has expanded its capacity for communication with ambulances and hospitals in that area as well as with those in western Maryland and Fayette and Greene Counties in Pennsylvania.

Two 16-channel programmable monitors and a phone patch have been added to the high band radio that has been in use by the hospital for the past year.

The augmented radio equipment in use since April 1 enables communication between University Hospital's Emergency Room, law enforcement agencies and ambulances in a wide area. Communication is either on a frequency assigned to the hospital or by cross band monitoring. About 30 to 40 radio calls are received each day.

Using the call letters KUP-349, University Hospital Emergency Room's radio is in operation 24 hours a day. Operators, one for each shift, were trained by the WVU Fire Service Extension. In addition, personnel who work in the Emergency Room office where the radios are located are also trained to operate the equipment.

Not only does the use of such communication alert the hospital to prepare for the impending arrival of an emergency case, but it also serves as a medium for delivering information about the patient.



Morgantown Medical Laboratory

596 Willey Street, Morgantown, WV 26505

Phone: (304) 292-3313

Lawrence F. Martin, M.D., Director

Phillip Cohen, M. D., Medical Director

John A Jupin, M.D., Pathologist

Reference services offered in:

Bacteriology
Parasitology
Serology
Chemistry
Hematology
Immunohematology
Diagnostic Cytology
Radiobioassay
Pathology

Specimen Containers, Mailers and Fee Schedules promptly forwarded upon request

Third-Party News, Views and Program Concerns

Crippled Children Advisory Board Expanded

The Advisory Board to the Crippled Children Program of the West Virginia State Department of Welfare has been expanded through the appointment of five ad hoc members with specialties other than that of the three orthopedic surgeons called for under the present West Virginia Public Welfare Law.

This was announced recently in a letter to Dr. Jack Leckie of Huntington, immediate Past President of the State Medical Association and now Chairman of the Association's Council, from Commissioner Thomas R. Tinder of the West Virginia Department of Welfare.

Commissioner Tinder reported that the following physicians had accepted the ad hoc appointments to the Crippled Children (CC) Advisory Board: Drs. J. Elliott Blaydes, Jr. (ophthalmologist), Bluefield; William E. Gilmore (thoracic surgeon), Parkersburg; D. Verne McConnell (plastic surgeon), Wheeling; William A. Neal (pediatric cardiologist), Morgantown; and Arthur L. Poffenbarger (neurologist), Charleston.

The Commissioner explained that at the time the section of the State law relating to the Advisory Board was passed (1936) the CC Program was primarily devoted to treatment of children with orthopedic problems. Since that time, it has expanded to include care for cardiac, neurological, plastic and other conditions involving many additional medical specialties. He added that recent attempts to have the State Legislature revise the law to include other disciplines on the CC Advisory Board have been unsuccessful.

Dr. Justus C. Pickett of Morgantown is Chairman of the CC Advisory Board. Dr. Henry M. Hills, Jr., of Charleston serves as the remaining member of the Board since Dr. Robert T. Humphries of Clarksburg recently resigned and discontinued his private medical practice.

Dr. Thomas G. Potterfield of Charleston serves as Medical Director of the CC Program and meets weekly with the Department of Welfare administrative staff. Drs. James H. Walker of Charleston and Thomas F. Scott of Huntington serve as Associate Medical Directors and likewise assist the staff on a weekly basis.

• Prepared by state government agencies involved in health care, and other third-party organizations.

Aetna Lists Suggestions In Hiring Aides, Delegating Duties

Under the legal doctrine of *respondiat superior*, a physician clearly is liable for the negligent acts of his or her employees. However, the solution to such a potential problem situation does not necessarily lie in not delegating responsibilites. The physician might actually lessen the chance of a malpractice claim if he or she *does* delegate time-consuming tasks to well trained aides, and thus is free to spend more time practicing quality medicine, material prepared by Aetna Life and Casualty has emphasized.

"When an employee is hired, make certain he or she is dependable. If the person has had previous employment, check out the track record. Select an aide who knows how to establish and maintain rapport with patients. This is the cornerstone to good relations, and patients do not usually sue unless there has been a breakdown in rapport," the Aetna information has stressed.

Here are other Aetna suggestions and observations:

"Select a qualified person. If possible, hire only licensed persons. Unlicensed aides must be trained, and the training must be comprehensive and complete. If formal training is available, have the aide attend. Once trained, monitor his or her performance—do not take it for granted.

"Define the employee's duties in writing and document both training and performance. Have written orders not only on what he or she is assigned or permitted to do, but also as to what he or she is not permitted to do. Do not delegate functions that require the professional judgment of a physician.

"The physician should be certain that he or she is always available to be seen by any patient who wants to see him or her, and the physician should be sure aides understand this. Aides should not be used to insulate the patient from the doctor.

"Telephone advice can be particularly hazardous if carried out by an aide. It is better that the physician handle these calls if at all possible. If calls are done by an aide, the aide should keep a written record of such contacts and it should be checked by the doctor."

GROUP INSURANCE

Officially sponsored by

WEST VIRGINIA STATE MEDICAL ASSOCIATION

SOUND PROTECTION

at a

SUBSTANTIAL SAVING IN COST

Please Send Me Descriptive Brochure On—

☐ **LONG TERM DISABILITY INCOME PROTECTION**
(Pays you a regular monthly benefit up to $2,000 per month when you are disabled)

☐ **$15,000 MAJOR HOSPITAL PLAN**
Covers you and your family up to $15,000 per person

☐ **LOW-COST LIFE INSURANCE**
In units of — $10,000 - $20,000 - $30,000 - $40,000 - $50,000

☐ **$100,000 ACCIDENTAL DEATH & DISMEMBERMENT INSURANCE**
Around the clock protection — 24 hours a day . . . 365 days a year . . . world wide

☐ **OFFICE OVERHEAD DISABILITY POLICY**
(Pays your office expense up to $3,500 per mo. while you are disabled)

☐ **A MUTUAL FUND PROGRAM**
Designed to qualify under HR-10

☐ **A MILLION DOLLAR CATASTROPHE LIABILITY POLICY**
(Covers: Malpractice—Home—Personal—Auto Liability)

Name _____ Address _____

MAIL TO: ADMINISTRATOR
McDONOUGH-CAPERTON-SHEPHERD-GOLDSMITH
P. O. BOX 1551 CHARLESTON, W. VA. (25326)

NOTE: A full time service representative travels the State and is always available for personal consultation. Your Resident Administrator provides complete service here in the State including processing and payment of claims.

Obituaries

WILLIAM PERILMAN, M. D.

Dr. William Perilman of Wheeling died on June 23 in an Ohio hospital. He was 65. He practiced general medicine in Wheeling from 1946 to 1966, when he went to the emergency room of Wheeling Hospital for five years before his retirement.

A native of Carnegie, Pennsylvania, Doctor Perilman was graduated from West Virginia University and received his M. D. degree in 1937 from the University of Arkansas School of Medicine.

A Captain in the U. S. Army during World War II, he was in the Bataan March and was held prisoner of the Japanese for three-and-one-half years.

Doctor Perilman was a member of the Ohio County Medical Society, the West Virginia State Medical Association, the American Medical Association and the Southern Medical Association.

Survivors include the widow; three sons, J. Bryan Perilman of Washington, D. C.; Richard Perilman, Philadelphia, Pennsylvania, and David Perilman, Morgantown; three brothers, Harry Perilman of Pittsburgh, the Rev. Nathan Perilman, Chapel Hill, North Carolina, and Joseph Perilman, Akron, Ohio; and two sisters, Mrs. Philip Nach, Newhall California, and Mrs. Louis Elfont, West Palm Beach, Florida.

* * *

PAUL C. STARKEY, M. D.

Dr. Paul C. Starkey of Ravenswood, a retired family physician with 62 years of service, died on July 15 in a rest home there. He was 93.

A native of Willowdale, in Jackson County, Doctor Starkey retired in 1972. He received his M. D. degree in 1910 from the University of Louisville School of Medicine. He began practice in 1910 at Poplar Grove, in Jackson County, and moved his office to Ravenswood in 1915.

Doctor Starkey had served on the staffs of Camden Clark Memorial and St. Joseph's hospitals in Parkersburg. He was honored by the Parkersburg Academy of Medicine in 1957 and was given the highest award of the American Legion for distinguished service in 1957.

He was an honorary member of the Parkersburg Academy of Medicine, the West Virginia State Medical Association and the American Medical Association.

Survivors include two daughters, Mrs. Virginia Smith of Ravenswood and Miss Frieda Starkey of Huntington; a son, Karl Starkey of Galena, Ohio; and a brother, Shirley L. Starkey of Yucaipa, California.

Free supplies before September 1.

FREE LECTRO-PADS, PAPER, AND MOUNTS —ENOUGH FOR 100 ECGs—WHEN YOU ORDER A NEW BURDICK EK/5A ELECTRO-CARDIOGRAPH BETWEEN NOW AND SEPTEMBER 1, 1976.

EK-5A paid for after 100 ECGs.

When you've used these free supplies, your EK-5A will have paid for itself.

BURDICK'S EK/5A CARDIOGRAPH —NOW WITH NEW PATIENT ISOLATION

—and unique automatic lead marking

The Burdick EK-5A is an instant-on solid-state electrocardiograph with a coveted reputation for accuracy, definition and dependability. It exceeds the minimum American Heart Association frequency-response recommendations, is Data-Phone compatible, and is backed by our there-when-you-need-us dealer service

This free-supplies offer, which makes it easy for you to own a Burdick EK-5A free and clear, is limited. Act now, before the September 1st deadline.

General Medical WEST VIRGINIA

2400 — FOURTH AVE.

HUNTINGTON, WEST VIRGINIA

OCTOBER
1976

Vol. 72 No. 10

The
WEST VIRGINIA
Medical Journal

Official Organ of the West Virginia State Medical Association

Box 1031 Charleston, W. Va. 25324

EDITOR EMERITUS
George F. Evans, M. D.
Clarksburg
1900-1976

EDITOR
Stephen D. Ward, M. D. (1977)
Wheeling

MANAGING EDITOR AND BUSINESS MANAGER
Mr. Charles R. Lewis
Charleston

EXECUTIVE ASSISTANT
Mr. Custer B. Holliday
Charleston

ASSOCIATE EDITORS
E. J. Van Liere, M. D. (1976)
Morgantown
John M. Hortmon, M. D. (1978)
Charleston
Vernon E. Duckwall, M.D.(1979)
Elkins
Thomas J. Holbrook, M.D.(1980)
Huntington
Joe N. Jorrett, M. D. (1982)
Oak Hill

Published monthly by the West Virginia State Medical Association under the direction of the Publication Committee. Original articles are accepted on condition that they are contributed solely to The Journal.

Entered as second-class matter January 1, 1926, at the post office at Charleston, West Virginia, under the act of March 3, 1879.

Subscription Rates: $10 a year in the U.S.A.; $15 in foreign countries; $2 per single copy. Advertising rates furnished on request. Address all communications to Business Manager, The West Virginia Medical Journal, Box 1031, Charleston, West Virginia 25324. Phone 346-0551.

Microfilm editions beginning with the 1972 volume are available from University Microfilms, Inc., 300 N. Zeeb Road, Ann Arbor, Michigan 48106.

Member 1976

CONTENTS

Scientific Articles

Presidential Address—Jack Leckie, M. D. 275

Identification, Stabilization, and Transport of the High-Risk Neonate—Martha D. Mullett, M. D.; and William A. Neal, M. D. 278

Unusual Manifestations of Acute Lymphocytic Leukemia—John S. Rogers II, M. D.; Elaine Eyster; Robert W. Hamilton, M. D.; and John H. Dossett, M. D. 281

Psychiatric Diagnosis and Referral: A Critical Reappraisal—Donald C. Carter, M. D. 285

The President's Page

Make Friends With A Neurotic—John J. Mahood, M. D., President, W. Va. State Medical Association 288

Editorials

George F. Evans—R. I. P. 289
Rationing Medical Care 290
Hopeless Cases 290
Election Issues Critical For Physicians 291

General News

Dr. John J. Mahood Assumes Presidency 292
Dr. Stephen D. Ward Named Journal Editor 295
Committee Appointments 297
CME Membership Requirement Under Study 299
Journal Readership Survey 300
Continuing Education Activities 301
Constitution, Bylaws Amendments 301
Tenth Mid-Winter Clinical Conference 305
Mrs. J. L. Mangus Heads Auxiliary 308
Dr. George F. Evans, Journal Editor, Dies 310

Special Departments

WVU Medical Center News viii
Third-Party News, Views, Program Concerns x
Obituaries xii
County Societies xiv
Resolutions xv
Necrology Report xviii
Classified Section xxv
Index to Advertisers xxvi

respond to one

According to her major symptoms, she is a psychoneurotic patient with severe anxiety. But according to the description she gives of her feelings, part of the problem may sound like depression. This is because her problem, although primarily one of excessive anxiety, is often accompanied by depressive symptomatology. Valium (diazepam) can provide relief for both—as the excessive anxiety is relieved, the depressive symptoms associated with it are also often relieved.

There are other advantages in using Valium for the management of psychoneurotic anxiety with secondary depressive symptoms: the psychotherapeutic effect of Valium is pronounced and rapid. This means that improvement is usually apparent in the patient within a few days rather than in a week or two, although it may take longer in some patients. In addition, Valium (diazepam) is generally well tolerated; as with most CNS-acting agents, caution patients against hazardous occupations requiring complete mental alertness.

Also, because the psychoneurotic patient's symptoms are often intensified at bedtime, Valium can offer an additional benefit. An *h.s.* dose added to the *b.i.d.* or *t.i.d.* treatment regimen can relieve the excessive anxiety and associated depressive symptoms and thus encourage a more restful night's sleep.

Valium® (diazepam) IV

2-mg, 5-mg, 10-mg scored tablets

in psychoneurotic anxiety states with associated depressive symptoms

surveillance because of their predisposition to habituation and dependence. In pregnancy, lactation or women of childbearing age, weigh potential benefit against possible hazard.

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

ROCHE

Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

THERE ARE A LOT OF PEOPLE GETTING BETWEEN YOU AND YOUR PATIENT.

Medicine today is in the spotlight, subjected to all kinds of scrutiny. Your control over patient therapy is being monitored, judged and occasionally abrogated, sometimes by unknown third parties.

The worry is that in the wake of this focus, the relationship between you and your patient will be weakened, without offsetting benefits. Consider three examples:

Drug substitution In most states, pharmacy laws, regulations or professional custom stipulate that your non-generic prescriptions be filled with the precise products you prescribe. But in the last five years, a dozen or more State laws have been changed, permitting the pharmacist in most cases to select a product of the same generic drug to fill any prescription.

Ironically, this dilution of physician control has taken place against a background of growing evidence that purportedly equivalent drug products may be inequivalent, since neither present drug standards nor their enforcement are optimal. In fact, the FDA itself says it has not enforced the same standards for hundreds of "follow-on" products that it had applied to the original NDA approvals. Thus physician control over patient therapy is being eroded with a risk that patients may be exposed to drugs of uncertain quality.

The major advertised claim for substitution is reduced prescription prices for consumers. Yet no documentation of any significant savings has been produced.

MAC Maximum Allowable Cost, MAC for short, is a Federal regulation designed to cut the Government's drug bill by setting price ceilings for drugs dispensed to Medicare and Medicaid patients. Unless the prescriber certifies on the prescription that a particular product is medically necessary, the Government intends to pay only for the cost of the lowest-priced, purportedly-equivalent, generally-available product. The effect of the program may be that elderly and indigent patients will be restricted to products which someone in Washington believes are priced right. Practicing doctors will have little to say about administration of the program, since Government will have absolute authority to make its choices stick.

The drug lag The future of drug and device research depends upon a scientific and regulatory environment that encourages therapeutic innovations. The American pharmaceutical industry annually is spending more than $1 billion of its own funds and evaluating more than 1,200 investigational compounds in clinical research. Disease targets include cancer, atherosclerosis, viruses and central nervous system disorders, among others. But there is a major barrier to the flow of new drugs to your patients: The cost of the research is more than ten times what it was, per product, in 1962; and whereas governmental clearance of new drug applications took six months then, it commonly consumes two years now.

The FDA needs adequate time, of course, to consider data. But it is equally clear that the present approval process contributes to needless delay of needed therapy. That's why the increased efficiency of the drug approval process is vital to all our futures.

If these issues concern you, we suggest that you make your voice heard—among your colleagues and your representatives in State legislatures and in Washington.

It could make a difference in your practice tomorrow.

P·M·A

Pharmaceutical Manufacturers Association
1155 Fifteenth Street, N.W., Washington, D.C. 20005

WVU Medical Center
—News—

• Compiled from moteriol furnished by Mrs. Mory Ellin Wylie, Director, Medicol Center News ond Informotion Services, Morgontown, W. Vo.

Two associate professors have been added to the faculty of the Department of Pediatrics, West Virginia University School of Medicine.

Stephen S. Amato, Ph.D., M.D., comes to WVU from the University of Nebraska where he served on the faculty while attending medical school and completing his residency in pediatrics.

A graduate of Manhattan College, he received his M.A. degree in Psychology and Science Education from Columbia University and his Ph.D. in Human Genetics and Cytogenetics from New York University. Beginning his teaching career at John Adams High School in Ozone Park, New York, he was an Instructor of Basic Sciences at St. Johns Riverside Hospital and an Assistant Professor of Biology at State University of New York at Westchester prior to completing his postgraduate study.

During his five years at the University of Nebraska Medical Center, he was Director of the Laboratory of Medical and Molecular Genetics, served as a medical geneticist at the Muscular Dystrophy Center, and was Assistant Professor of Human Genetics and Anatomy. For the past two years he served as Consultant to the Nebraska State Birth Defects Program as well as to committees on graduate medical education, curriculum and continuing education.

He is the author or co-author of 15 publications primarily in the field of cytogenetics, a study of the relationship between chromosomal abnormality and human defects or disease.

Doctor Amato is a candidate member of the American Academy of Pediatrics, a member of the American Society of Human Genetics, the American Genetics Society and the American Society for Cell Biology, as well as the American Medical Association and the American Association for the Advancement of Science.

Dr. James R. Gaskell is returning to the Department of Pediatrics where he was a resident from 1967 to 1970.

Since completing his postgraduate study, he has been in the private practice of pediatrics in Athens, Ohio.

At WVU, he is working in the field of ambulatory pediatrics and is associated with the Pediatric Group Practice at the Outpatient Clinic of University Hospital.

Born in New Castle, Pennsylvania, he graduated from Juniata College and the University of Pittsburgh School of Medicine.

After completing his internship at WVU, he served as a Captain in the Army Medical Corps for two years before returning for his residency.

He is the author or co-author of several publications detailing research in the area of general pediatrics.

Edward N. McIntosh, M. D., S. D.

A specialist in reproductive physiology and bioenergetics has joined the faculty of the Department of Obstetrics and Gynecology.

Edward Noel McIntosh, M. D., S. D., Associate Professor, was born in David City, Nebraska. He was graduated with a B. S. degree in Chemistry from the University of Michigan and did postgraduate work in biochemistry at the University of Nebraska.

He was graduated from Harvard Medical School and received a master's degree in Hygiene and a doctor of science in Population Science from the School of Public Health of that institution.

Prior to his association with WVU, Doctor McIntosh was Assistant Professor in both the Department of Obstetrics and Gynecology and the Department of Population Science at Harvard. He had served as Associate Director of the Fertility and Endocrine Unit at Boston Hospital for Women since 1973.

He is a Diplomate of the American Board of Obstetrics and Gynecology and the National Board of Medical Examiners and is a member of the New York Academy of Sciences and the American Chemical Society.

Doctor McIntosh is the author or co-author of a number of publications describing his research concerning the role of hormones, drugs and metabolic processes in infertility and pregnancy.

Microbiologist Joins Faculty

Herbert Alden Thompson, Ph.D., a former assistant research biochemist at the University of California at Irvine, has been named Assistant Professor of Microbiology.

Doctor Thompson, who was born in Albert Lea, Minnesota, received his A. B. and M. A. degrees from Drake University and his Ph.D. from the University of Kansas. He held teaching assistantships at both universities.

He is the author or co-author of a number of abstracts and papers reporting his research, particularly in the area of protein biosynthesis and intracellular parasitism.

He is a member of the American Society of Microbiology.

Who's
going to pay
you if you
get sick
?

**A DISABILITY INCOME CHECKLIST
THAT
EVERY DOCTOR SHOULD HAVE**

A leading medical publication published the following provisions which you should look for in a Disability Income contract:

1. Is the policy non-cancellable and guaranteed renewable?
2. Is the policy guaranteed renewable after age 65 as long as you continue full-time activity?
3. Is disability defined in the policy in terms of your own occupation or specialty without qualifications?
4. Is the premium waived retroactively for the duration of disability?
5. Is the policy free from any requirements as to house confinement?
6. Are you covered if pre-existing condition is not diagnosed until the policy goes into effect?
7. Does the policy cover loss of use of limbs as well as dismemberment and loss of speech and hearing as well as sight?
8. Is there a rehabilitation provision?
9. Is an act of war or military service the only exclusion?
10. Are you again eligible for full-time benefits if a disability recurs soon after you return to work?

CONNECTICUT MUTUAL'S CONTRACT CONTAINS EACH OF THESE PROVISIONS!

"THE ONLY SECURITY YOU HAVE IN LIFE IS THE SECURITY YOU CREATE FOR YOURSELF!"

WE CAN HELP!

For More Information Write or Call

PETER S. WHITE, CLU, ROBERT G. DUNNAVANT, CLU, AND DAVID E. HADEN
SUITE 807 CHARLESTON NATIONAL PLAZA
CHARLESTON, WEST VIRGINIA 25301
PHONE (304) 343-8871

Third-Party News, Views and Program Concerns

• Prepared by state government agencies involved in health care, and other third-party organizations.

Swine Flu Liability Provisions Summarized By AMA

In an effort to clarify language in the National Swine Flu Immunization Program of 1976 as far as provisions for protection against liability are concerned, the following information is offered from a summary of the legislation prepared by the American Medical Association:

"In order to:

"(A) assure an orderly procedure for the prompt and equitable handling of any claim for personal injury or death which may result from the administration of the vaccine; and

"(B) achieve participation in the swine flu vaccine program of manufacturers, entities providing inoculations without charge (and in compliance with informed consent procedures), and medical and other health personnel providing or assisting in inoculations without charge for the vaccine or its administration (and in compliance with informed consent procedures), it would be the purpose of this bill to have all claims under the program asserted against the U. S. under the Federal Tort Claims Act.

"The U. S. would be liable with respect to claims submitted after September 30, 1976, for personal injury or death resulting from the administration of vaccine under the program and based upon the act or omission of a program participant in the same manner and extent as the U. S. would be liable in any other action brought against it under the Federal Tort Claims Act, except that:

"(A) the liability of the U. S. arising out of the act of omission of a program participant may be based on any theory of liability that would govern an action against a private individual, including negligence, strict liability in tort, and breach of warranty;

"(B) the exceptions specified in the Federal Tort Claims Act (assault, battery, false imprisonment or arrest, libel, deceit, misrepresentation, contractual interference, slander, malicious prosecution, and abuse of process) would not apply in an action based upon the act or omission of a program participant; and

"(C) if an action is brought within two years of the vaccine's administration and is dismissed because plaintiff did not file the required administrative claim, the plaintiff would have 30 days from the date of dismissal (or two years from the date the claim arose, whichever is later) to file the administrative claim.

" 'Program Participant' would mean the vaccine manufacturers and distributors who participate in the program, the public and private agencies or organizations that participate in the program without charge for the vaccine or its administration, and the medical and paramedical personnel who, without charge for the vaccine or its administration, administer or assist in administering inoculations with such vaccine (and who comply with informed consent procedures).

"The remedy against the U. S. for personal injury or death resulting from the administration of flu vaccine would be exclusive of any other civil action or proceeding for such personal injury or death against any employee of the Government (including persons working temporarily, and without compensation) or program participant whose act or omission gave rise to the claim.

"The Attorney General would defend any civil action or proceeding brought in any court against any Government employee or program participant (or liability insurer thereof) based upon a claim alleging personal injury or death resulting from administration of vaccine under the program. All process papers served for the claim would be furnished to the U. S. Attorney for the district where the civil action or proceeding is brought, to the Attorney General, and to the Secretary.

"Upon the Attorney General's certification that a civil action or proceeding brought in *any* court against any Government employee or program participant is based upon a claim alleging personal injury or death resulting from administration of flu vaccine, such action or proceeding would be deemed an action against the U. S. under the Federal Tort Claims Act, and all references thereto. If action is brought in a U. S. district court, upon certification the U. S. would be substituted as the defendant.

(Continued on Page xvi)

GROUP INSURANCE

Officially sponsored by

WEST VIRGINIA STATE MEDICAL ASSOCIATION

SOUND PROTECTION

at a

SUBSTANTIAL SAVING IN COST

Please Send Me Descriptive Brochure On—

☐ **LONG TERM DISABILITY INCOME PROTECTION**
(Pays you a regular monthly benefit up to $2,000 per month when you are disabled)

☐ **$15,000 MAJOR HOSPITAL PLAN**
Covers you and your family up to $15,000 per person

☐ **LOW-COST LIFE INSURANCE**
In units of — $10,000 - $20,000 - $30,000 - $40,000 - $50,000

☐ **$100,000 ACCIDENTAL DEATH & DISMEMBERMENT INSURANCE**
Around the clock protection — 24 hours a day . . . 365 days a year . . . world wide

☐ **OFFICE OVERHEAD DISABILITY POLICY**
(Pays your office expense up to $3,500 per mo. while you are disabled)

☐ **A MUTUAL FUND PROGRAM**
Designed to qualify under HR-10

☐ **A MILLION DOLLAR CATASTROPHE LIABILITY POLICY**
(Covers: Malpractice—Home—Personal—Auto Liability)

Name _____ Address _____

MAIL TO: ADMINISTRATOR
McDONOUGH-CAPERTON-SHEPHERD-GOLDSMITH
P. O. BOX 1551 CHARLESTON, W. VA. (25326)

NOTE: A full time service representative travels the State and is always available for personal consultation. Your Resident Administrator provides complete service here in the State including processing and payment of claims.

Obituaries

ROBERT C. HATFIELD, M. D.

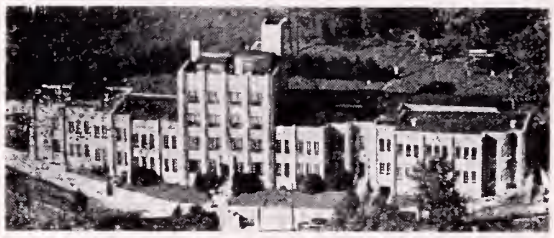
Dr. Robert C. Hatfield of Smith Mountain, Virginia, formerly of Oceana, in Wyoming County, died on July 21 in a Bedford (Virginia) hospital. He was 71.

Doctor Hatfield, a specialist in internal medicine and public health, was a native of Simon, also in Wyoming County. A graduate of Marshall University, he attended West Virginia University and received his M. D. degree in 1935 from the University of Louisville School of Medicine.

In the Oceana area, Doctor Hatfield was a coal company physician and later in private practice for 40 years before retiring and moving to Virginia.

He was a former member of the Wyoming County Medical Society, the West Virginia State Medical Association and the American Medical Association.

Survivors include the widow; one son, Dr. Sherman E. Hatfield of Charleston; and four sisters, Mrs. Ruth Spratt and Mrs. Garnet Hatfield, both of Hanover; Mrs. Jack Trent, Gilbert, and Mrs. Angie Walker, Pineville.



Radiology:
Korl J. Myers, Sr., M. D.

Pathology:
Fulvio Franyutti, M. D.

Surgery:
Hu C. Myers, M. D.
A. Kyle Bush, M. D.
T. H. Chang, M. D.
J. W. Waodford, M. D.
A. Richord Weaver, M. D.

Gynecology ond Obstetrics:
Raymond W. Cronlund, M. D.

Internal Medicine:
E. G. Guy, M. D.
B. G. Thimmappa, M. D.
Karl J. Myers, Jr., M. D.
Amitava Ghasal, M. D.

Pediatrics:
E. G. Kreider, M. D.
J. M. Nissley, M. D.

Dentistry:
Glenn B. Paling, D. D. S.

Family Practice:
Alan S. Petersan, M. D.

THE MYERS CLINIC
Philippi, West Virginia

BRIEF SUMMARY OF
PRESCRIBING INFORMATION
ANTIMINTH ® (pyrantel pamoate)
ORAL SUSPENSION

Actions. Antiminth (pyrantel pamoate) has demonstrated anthelmintic activity against *Enterobius vermicularis* (pinworm) and *Ascaris lumbricoides* (roundworm). The anthelmintic action is probably due to the neuromuscular blocking property of the drug.

Antiminth is partially absorbed after an oral dose. Plasma levels of unchanged drug are low. Peak levels (0.05-0.13μg/ml) are reached in 1-3 hours. Quantities greater than 50% of administered drug are excreted in feces as the unchanged form, whereas only 7% or less of the dose is found in urine as the unchanged form of the drug and its metabolites.

Indications. For the treatment of ascariasis (roundworm infection) and enterobiasis (pinworm infection).

Warnings. *Usage in Pregnancy:* Reproduction studies have been performed in animals and there was no evidence of propensity for harm to the fetus. The relevance to the human is not known.

There is no experience in pregnant women who have received this drug.

The drug has not been extensively studied in children under two years; therefore, in the treatment of children under the age of two years, the relative benefit/risk should be considered.

Precautions. Minor transient elevations of SGOT have occurred in a small percentage of patients. Therefore, this drug should be used with caution in patients with preexisting liver dysfunction.

Adverse Reactions. The most frequently encountered adverse reactions are related to the gastrointestinal system.

Gastrointestinal and hepatic reactions: anorexia, nausea, vomiting, gastralgia, abdominal cramps, diarrhea and tenesmus, transient elevation of SGOT.

CNS reactions: headache, dizziness, drowsiness, and insomnia. Skin reactions: rashes.

Dosage and Administration. *Children and Adults:* Antiminth Oral Suspension (50 mg of pyrantel base/ml) should be administered in a single dose of 11 mg of pyrantel base per kg of body weight (or 5 mg/lb.); maximum total dose 1 gram. This corresponds to a simplified dosage regimen of 1 ml of Antiminth per 10 lb. of body weight. (One teaspoonful=5 ml.)

Antiminth (pyrantel pamoate) Oral Suspension may be administered without regard to ingestion of food or time of day, and purging is not necessary prior to, during, or after therapy. It may be taken with milk or fruit juices.

How Supplied. Antiminth Oral Suspension is available as a pleasant tasting caramel-flavored suspension which contains the equivalent of 50 mg pyrantel base per ml, supplied in 60 ml bottles and Unitcups™ of 5 ml in packages of 12.

ROERIG Pfizer
A division of Pfizer Pharmaceuticals
New York, New York 10017

One swallow does it

eliminates Pinworms and Roundworms with a single dose

- **Single dose effectiveness against both pinworms and roundworms**— The only single-dose anthelmintic effective against pinworms *and* roundworms.
- **Nonstaining**—to oral mucosa, stomach contents, stools, clothing or linen.
- **Well tolerated**—the most frequently encountered adverse reactions are related to the gastrointestinal tract.
- **Economical**—a single prescription will treat the whole family.
- **Highly acceptable**—pleasant-tasting caramel flavor.
- **Convenient**—just 1 tsp. for every 50 lbs. of body weight. May be taken without regard to meals or time of day.

ROERIG Pfizer
A division of Pfizer Pharmaceuticals
New York, New York 10017

Please see prescribing information on facing page. NSN 6505-00-148-6967

Antiminth® ORAL SUSPENSION
(pyrantel pamoate) equivalent to 50mg pyrantel/ml

County Societies

TYGART'S VALLEY

The Tygart's Valley Medical Society held its 27th annual Postgraduate Session on June 17 at the Elks Country Club in Elkins.

About 50 members and guests, including five West Virginia University Medical School students, attended the afternoon scientific session (*Editor's Note*: See the July issue of *The Journal*, Page 194).

Some 80 members and guests attended the evening social hour and banquet. Joseph Burke, Chairman of the Randolph County Bicentennial Committee, gave an update on the Bicentennial. The banquet speaker was Thomas Richard Ross, former Dean and Professor of History at Davis & Elkins College.—A. Kyle Bush, M. D., Secretary.

* * *

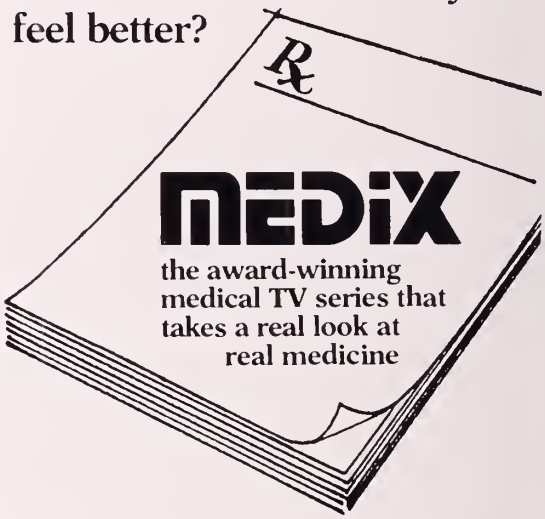
McDOWELL

The McDowell County Medical Society met on May 12 at the Dry Fork Medical Clinic in Yukon.

The Society endorsed sending a letter to the State Comprehensive Health Planning Agency regarding the necessity of a new building for Doctor's Memorial Hospital in Welch.

A film produced by the National Health Service Corps tracing the development of the corps was shown.—Arthur A. Carr, M. D., Secretary.

What can you recommend to your patients that's safe, effective, free from side effects...and makes everyone feel better?



consult local listing for time/channel

BLUEFIELD SANITARIUM CLINIC

525 BLAND STREET
BLUEFIELD, W. VA.

ANESTHESIOLOGY
DAVID H. GATHERUM, M.D.

EMERGENCY SERVICE
S. K. CHOPRA, M.D.
B. P. BHASIN, M.D.

GASTROENTEROLOGY
LOUISE A. OWENS, M.D.

INTERNAL MEDICINE
H. F. WARDEN, M.D.
C. D. PRUETT, M.D.
R. O. ROGERS, M.D.

LABORATORY MEDICINE
DAVID F. BELL, JR., M.D.
JOHN J. BRYAN, M.D.

NEUROSURGERY
WILLIAM F. HILLIER, M.D.
E. L. GAGE, JR., M.D.
ADNAN SILK, M.D.

NUCLEAR MEDICINE
C. D. PRUETT, M.D.
R. O. ROGERS, M.D.

OB. & GYN.
CHARLES S. FLYNN, M.D.
T. KEITH EDWARDS, M.D.

OPHTHALMOLOGY
F. D. WHITE, M.D.

ORTHOPEDICS
EDWARD M. LITZ, M.D.

PEDIATRICS
GRADY McRAE, M.D.
E. M. SPENCER, M.D.

ROENTGENOLOGY
GEORGE C. KING, M.D.
JOHN A. ANZIULEWICZ, M.D.

THORACIC & VASCULAR SURGERY
ROBERT W. NEILSON, JR., M.D.
JAMES P. THOMAS, M.D.

UROLOGY
STEVE J. MISAK, M.D.

ADMINISTRATOR
JAMES L. FOSTER

Resolutions

Editor's Note: Here is a complete text of resolutions *adopted*, in the form in which they were finally approved, at the second and final House of Delegates session during the West Virginia State Medical Association's 109th Annual Meeting at The Greenbrier August 18-21:

Resolution No. 1—WESPAC—By The Kanawha Medical Society.

WHEREAS, The significant role occupied by WESPAC and AMPAC in the present political and legislative spheres is recognized by all physicians concerned with a maximum continuing ability to assure the best possible care for their patients;

THEREFORE, BE IT RESOLVED, That the House of Delegates of the West Virginia State Medical Association urge the officers of WESPAC to request each and every component medical society in the State to include within its dues structure an item permitting members to voluntarily contribute to WESPAC and AMPAC; and

BE IT FURTHER RESOLVED, That these items be listed separately but on the same statement with all billings for professional membership dues and that the suggested voluntary contribution be shown as minimum of $25 for WESPAC; and

BE IT FURTHER RESOLVED, That officers of WESPAC make available information on all political and financial activities of WESPAC to contributing members, on request, during the West Virginia State Medical Association's Annual Meeting.

A Substitute Resolution for Resolution No. 3—Malpractice Countersuit Mechanism—By The Kanawha Medical Society.

WHEREAS, Physicians are deeply concerned over the rising number of frivolous and non-meritorious medical malpractice suits being filed against them in West Virginia and throughout the nation; and

WHEREAS, Physicians are convinced of a critical need to adopt a plan of action with objectives consistent with those in actions taken by state medical organizations in Alabama, Illinois and Florida to counter a national trend seriously threatening the practice of medicine everywhere;

THEREFORE, BE IT RESOLVED, That the West Virginia State Medical Association take steps to establish a mechanism to advise, assist and support West Virginia physicians regarding counterlitigation against a party or parties who, in the opinion of appropriate legal counsel, have initiated baseless and frivolous professional liability proceedings.

Resolution No. 4—Non-Medical Services—By Ralph W. Ryan, M.D., Delegate from the Monongalia County Medical Society.

WHEREAS, Some types of non-medical or limited health care practitioners have succeeded in increasing the legal limits of their practice beyond the limits of their training and expertise; and

WHEREAS, The public is confused and misled by the false claims of competence in medical care by such non-medical and limited practitioners; and

WHEREAS, The health and lives of the public are endangered by the deception which causes acceptance of spurious medical care in place of competent medical care;

THEREFORE, BE IT RESOLVED, That the West Virginia State Medical Association take a position that *only* full and adequate training in medical care prepares an individual to furnish competent and responsible diagnoses and treatment of diseases and abnormalities of the human body; and

BE IT FURTHER RESOLVED, That the West Virginia State Medical Association urge its members and the component county medical societies to make every effort to protect the public from being deceived by the false claims of limited or non-medical practitioners who would substitute incompetent care for responsible medical care.

Resolution No. 5—Physician Dissemination of Health Information—By Ralph W. Ryan, M.D., Delegate from the Monongalia County Medical Society.

WHEREAS, The practice of medicine is a highly technical and scientific profession which requires personal skill and expertise learned from individual and supervised experience, and many years of laborious and painstaking academic and clinical training to achieve competence; and

WHEREAS, The public, without such training in medicine, has difficulty in comprehending the problems of health and disease or the difficulties often inherent in making a correct diagnosis or administering effective treatment; and

WHEREAS, There is inadequate education of the public in health-related subjects and in understanding of problems associated with provision of medical care; and

WHEREAS, The lack of public comprehension of the complexities of medical training and practice, of the delicate but crucial relationships between the physician and his patient, of the necessity for confidence of the patient in his physician, and of the socio-medical and socio-economic complexities of operating a medical office, often may cause the public to be easily misled into legislative measures, legal actions, or socio-medical schemes which are injurious both to the public welfare and to the physician's welfare;

THEREFORE, BE IT RESOLVED, That the West Virginia State Medical Association urge individual physicians and the component county medical societies to use their time and resources to actively obtain a voice in public meetings and organizational discussions of matters pertaining to medical or health care, including prudent and tactful dis-

semination of accurate and practical educational material through lectures before groups or on radio or television programs, by newspaper and magazine articles, by movies or tape recordings, and by pamphlet distribution; and

BE IT FURTHER RESOLVED, That the West Virginia State Medical Association urge individual physicians to make a special effort to give correct information and orientation to their representatives in the State Legislature and to State Officials, so that legislation injurious to the health of the public will not be passed.

THIRD-PARTY NEWS . . .

(Continued from Page x)

"Upon the Attorney General's certification, a civil action or proceeding commenced in a State court would be removed to the appropriate U. S. district court and be deemed an action brought against the U. S. The U. S. would be substituted as the defendant. Should a U. S. district court determine that the action or proceeding is not one to which this bill would apply the case would be remanded to the State court.

"Where an action or proceeding is precluded because of the availability of a remedy from the U. S. under any other law, the action or proceeding would be dismissed, with the running of any limitation of time for commencing, or filing the proceedings for compensation suspended during the pendency of the action or proceeding hereunder.

"A program participant would cooperate with the United States in the defense of a claim or suit based upon alleged acts or omissions of the program participant. If the program participant failed to cooperate, the U. S. district court would upon motion substitute such participant as the defendant in place of the U. S. and, upon motion, remand the suit to the court in which it was instituted.

"Should payment be made by the U. S. to any claimant bringing a claim, the U. S. would have the right to recover for that portion of the damages so awarded or paid, as well as costs of litigation resulting from failure of the participant to carry out contractual obligations or responsibilities under the program, or attributable to negligent conduct on the part of the program participant. The United States could maintain such action in the U. S. district court in which the program participant resides or has its principal place of business.

"Within one year (and semi-annually thereafter) the Secretary would report to Congress on the settlement and litigation activities under the immunization program, including detailed information on claims for recovery connected with the program."

Live a little history while you learn a lot of new medicine

American Medical Association's 30TH Clinical Convention December 4-7, 1976

CME
Philadelphia

CME tailored to your needs
The primary purpose of the Clinical program is to provide you with a broad-based multidisciplinary learning experience not usually available at your specialty society meetings.

The scientific program features an exceptionally large and broad selection of Category 1 courses which provide credits toward the AMA Physician's Recognition Award. In fact, the scientific program is the largest ever offered at an AMA Clinical Convention.

In Category 1, you can choose from 46 postgraduate courses, 9 general sessions, telecourses, living teaching demonstrations, and conducted exhibit rounds. In addition, Category 2 credits can be obtained by attending luncheon and "Meet the Professor" sessions.

Send for the Philadelphia Clinical CME Brochure today! It provides a complete list and description of the courses offered. Send in the coupon below today.

Dept. of Meeting Services
American Medical Association
535 N. Dearborn St.
Chicago, Ill. 60610

Please send me the Philadelphia Clinical CME brochure.

Name _____

Address _____

City _____

State/Zip _____

Cold war.

It was bad enough we had to fight the British for our freedom. But on top of that, we had to fight the weather, too.

Because winter at Valley Forge meant snow, ice, and freezing temperatures. All serious enemies to a makeshift army without proper clothing, not nearly enough food, and short on ammunition.

It was an army long on courage, but short on money.

And then the money came. Some $27,000,000 from the pockets of new Americans.

That's how people took stock in America back then, and you know how the story turned out.

Nowadays, people are still helping America stay strong and self-sufficient. And they're helping themselves to safe, dependable savings. By taking stock in America with the Payroll Savings Plan.

Buy United States Savings Bonds.

They won't leave you out in the cold.

Now E Bonds pay 6% interest when held to maturity of 5 years (4½% the first year). Lost, stolen or destroyed Bonds can be replaced if records are provided. When needed, Bonds can be cashed at your bank. Interest is not subject to state or local income taxes, and federal tax may be deferred until redemption.

Take stock in America.

200 years at the same location.

Ad Council A public service of this publication and The Advertising Council.

Necrology Report

The following is a list of West Virginia physicians whose deaths have been reported to the West Virginia State Medical Association during the past year:

1975

Aug. 29—Everett H. Starcher ..... Ripley
Sept. 7—Charles M. Fleshman ... Savannah, Georgia
Sept. 29—Daniel Hale ..... Princeton
Oct. 5—William F. Beckner ..... Huntington
Oct. 18—Richard B. Talbott ..... Martinsburg
Nov. 1—Jesse R. Tuckwiller ..... Lewisburg
Nov. 2—Joseph U. Rohr ..... Charleston
Nov. 5—Robert A. Ashworth ..... Moundsville
Nov. 11—Robert S. Barrett ..... Huntington
Nov. 23—R. Stuart Van Metre ..... Barboursville
Nov. 30—Vernon L. Dyer ..... Petersburg
Dec. 14—Charles D. Houck ..... Canton, Ohio
Dec. 27—Raymond H. Lewellyn ..... Wheeling
Dec. 29—G. Ralph Maxwell ..... Morgantown

1976

Jan. 8—Narciso Chan ..... St. Albans
Feb. 7—Joseph E. Walthall, III Anaheim, Calif.
Feb. 8—Charles B. Chapman ..... Welch
Feb. 9—Eldon B. Tucker, Sr. ..... Morgantown
Feb. 15—Grover C. Robertson ..... Charleston
Feb. 20—Dan Glassman ..... Pt. Pleasant
Feb. 21—Everett Roy Cooper ..... Troy
Feb. 21—Raymond A. Tomassene ..... Wheeling
Feb. 25—Ludwig Frank ..... London, England
Mar. 29—Dudley C. Ashton ..... Beckley
Mar. 30—Philip Johnson ..... Fairmont
May 11—Philip Azar ..... Beallville, Illinois
May 12—Hubert T. Marshall ..... Morgantown
May 19—Lowell W. Schwab ..... Arlington, Virginia
June 5—W. F. Dorsey ..... Knoxville, Tennessee
June 6—Noel F. Coulon ..... Bluefield
June 11—Thomas G. Matney ..... Peterstown
June 16—Walter W. Point ..... Charleston
June 23—William Perilman ..... Wheeling
July 15—Paul Clarence Starkey ..... Ravenswood

Respectfully submitted,

Charles R. Lewis,
Executive Secretary

August 19, 1976

Postgraduate Rheumatology Course By ACP In Philadelphia

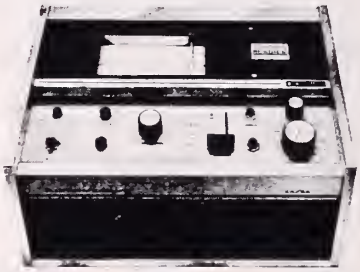
A comprehensive review of diagnosis and management of rheumatology will be featured in a four-day postgraduate course presented by the American College of Physicians at the Hilton Hotel in Philadelphia, November 1-4.

The course will consist of lectures, small group workshops, patient presentations, panel discussions and laboratory demonstrations—with emphasis on the newer concepts that have improved the understanding and management of rheumatic diseases.

For information and registration contact Registrar, Postgraduate Courses, ACP, 4200 Pine Street, Philadelphia, Pennsylvania 19104.

· Physician · Nurse
· Biomedical Engineer
· Administrator
· Medical Technician

Each gets what he wants—
in a new Burdick EK/5A



THE PHYSICIAN
demands diagnostic accuracy and definition, no time-consuming retakes; mistake-free lead coding—and that's what the solid-state EK/5A delivers.

THE NURSE OR MEDICAL TECH
wants features like the EK/5A automatic lead marking activated by a fast-switching lead selector, and easy portability.

THE BIOMED ENGINEER
looks for multiple use in the hospital; patient-isolated circuitry; solid-state simplicity; computer compatibility; sound ECG design.

THE ADMINISTRATOR AND PURCHASING AGENT
like (1) the savings that result from dependable performance; (2) medical staff satisfaction.

BURDICK®

Write us today for a demonstration in your office.

General Medical WEST VIRGINIA

2400 — FOURTH AVE.
HUNTINGTON, WEST VIRGINIA

NOVEMBER
1976

Vol. 72 No. 11

The WEST VIRGINIA Medical Journal

Official Organ of the West Virginia State Medical Association

Box 1031 Charleston, W. Va. 25324

EDITOR EMERITUS
George F. Evans, M. D.
Clarksburg
1900-1976

EDITOR
Stephen D. Ward, M. D. (1977)
Wheeling

MANAGING EDITOR AND BUSINESS MANAGER
Mr. Charles R. Lewis
Charleston

EXECUTIVE ASSISTANT
Mr. Custer B. Holliday
Charleston

ASSOCIATE EDITORS
E. J. Von Liere, M. D. (1976)
Morgantown
John M. Hortman, M. D. (1978)
Charleston
Vernon E. Duckwall, M.D.(1979)
Elkins
Thomas J. Halbrook, M.D.(1980)
Huntington
Joe N. Jarrett, M. D. (1982)
Oak Hill

Published monthly by the West Virginia State Medical Association under the direction of the Publication Committee. Original articles are accepted on condition that they are contributed solely to The Journal.

Entered as second-class matter January 1, 1926, at the post office at Charleston, West Virginia, under the act of March 3, 1879.

Subscription Rates: $10 a year in the U.S.A.; $15 in foreign countries; $2 per single copy. Advertising rates furnished on request. Address all communications to Business Manager, The West Virginia Medical Journal, Box 1031, Charleston, West Virginia 25324. Phone 346-0551.

Microfilm editions beginning with the 1972 volume are available from University Microfilms, Inc., 300 N. Zeeb Road, Ann Arbor, Michigan 48106.

Member 1976

CONTENTS

Scientific Articles

Diagnosis and Treatment of Benign Lesions in the Upper Urinary Collecting System—Tara C. Sharma, M. D.; Charles A. Hoffman, M. D.; Harold N. Kagan, M. D.; and Rafael E. Molina, M. D. 311

Interpretation of Non-Interpretive Psychiatric Intervention in the General Hospital Setting: An Overview of the Psychiatric Consultation—Greenbrier Almond, M. D. 317

Scientific Department

Medical Grand Rounds from the West Virginia University Medical Center (Carcinoid Tumors and Carcinoid Syndrome)—Edited by Raymond B. Weiss, M. D. 321

The President's Page

'Paranoia' Healthy for Physicians—John J. Mahood, M. D., President, W. Va. State Medical Association 328

Editorials

HMOs and Rationing 329
Students Enrolled in WVU Medical Center 330
Physicians Get Rep. Staggers' Attention 330
The Insurance Package 331

General News

Tenth Mid-Winter Clinical Conference 332
AMA Clinical Convention 335
Continuing Education Activities 336
Committee Appointments 336
Modest Insurance Premium Increase Proposed 337
Birth Control Treatment Leads Claims 338
SMA Scientific Assembly 338
State Health Department Assigned New Role 338
WVU Medical School Faculty Promotions 339
Martinsburg VA Center Gets CME Approval 339
WVU Seminar Honors Doctor Flink 340

Special Departments

WVU Medical Center News x
Third-Party News, Views, Program Concerns xii
Obituaries xiv
County Societies xvii
Book Review xviii
Classified Section xxvii
Index to Advertisers xxviii

respond to one

According to her major symptoms, she is a psychoneurotic patient with severe anxiety. But according to the description she gives of her feelings, part of the problem may sound like depression. This is because her problem, although primarily one of excessive anxiety, is often accompanied by depressive symptomatology. Valium (diazepam) can provide relief for both—as the excessive anxiety is relieved, the depressive symptoms associated with it are also often relieved.

There are other advantages in using Valium for the management of psychoneurotic anxiety with secondary depressive symptoms: the psychotherapeutic effect of Valium is pronounced and rapid. This means that improvement is usually apparent in the patient within a few days rather than in a week or two, although it may take longer in some patients. In addition, Valium (diazepam) is generally well tolerated; as with most CNS-acting agents, caution patients against hazardous occupations requiring complete mental alertness.

Also, because the psychoneurotic patient's symptoms are often intensified at bedtime, Valium can offer an additional benefit. An *h.s.* dose added to the *b.i.d.* or *t.i.d.* treatment regimen can relieve the excessive anxiety and associated depressive symptoms and thus encourage a more restful night's sleep.

Valium® (diazepam) Ⓘⓥ

2-mg, 5-mg, 10-mg scored tablets

in psychoneurotic anxiety states with associated depressive symptoms

surveillance because of their predisposition to habituation and dependence. In pregnancy, lactation or women of childbearing age, weigh potential benefit against possible hazard.

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

ROCHE

Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

You'll Find More Than A Touch of Class on the

West Virginia State Medical Association

Trans Panama Canal Air/Sea Cruise

Barbados • Grenada • La Guaira/Caracas • Aruba • Cartagena
San Blas Islands • Panama Canal/Balboa

w have the opportunity to take a luxury ten- cruise vacation that ludes direct flights to the o, all luggage handling, special charm and bience of shipboard life in finest cruise tradition. Plus aribbean itinerary that includes uth America and transit ough the fascinating Panama nal. It's forever springtime his sunny part of the world.

why not join us!

e leave Cincinnati February 1, 1977 d return on ruary 10, 1977.

Never will your travel dollars have been spent so wisely. Cost for the entire vacation, which includes round-trip airfare via chartered DC-10 jets, fine staterooms and superb cuisine aboard prestigious Sun Line's Stella Oceanis, is as low as $998.

This is a once-in-a-lifetime chance to vacation in the sun at a price that will make you feel as good as your tan.

Come with us and let a whim be your guide on the Trans Panama Canal Air/Sea Cruise

SEND TO: WEST VIRGINIA STATE MEDICAL ASSOCIATION
P. O. BOX 1031
CHARLESTON, WEST VIRGINIA 25324

Enclosed is my check for $_____ ($100 per person) as deposit.

Name(s) _____

Home Address _____

City _____ State _____ Zip _____

WVU Medical Center —News—

Editor's Note: Miss Virginia S. (Susie) Villani of Welch, a senior in the West Virginia University School of Medicine, offered the following remarks on the honor code during orientation of first-year medical school students in Morgantown in August. Miss Villani is the daughter of Dr. and Mrs. A. J. Villani, and this material is offered with the thought that as long as there are students who have Miss Villani's perception, the future of medicine will be bright.

• **Compiled from material furnished by Mrs. Mary Ellin Wylie, Director, Medical Center News and Information Services, Morgantown, W. Va.**

ALTHOUGH you will seldom, during your four years of medical school, hear the topic addressed formally, the honor code is an integral part of the philosophy of medicine taught here at West Virginia University. When I sat where you sit now, knowing I had signed the honor code sent in the mail, I was hardly aware of its ramifications. I realize now that your education is beginning as part of you as a person—and no longer as simply grades on a piece of paper. With this comes the assumption of responsibility not only for your own actions, but also for the actions of those who sit beside you: those who now are strangers, but who will soon be your friends and colleagues. It is only through a strong mutual effort that you can cultivate the attributes of integrity, compassion and understanding which elevate the profession of medicine from science to art.

The premise behind the spirit of the honor code is fourfold. The first states: "I shall conduct myself in a manner which is in keeping with the integrity and great responsibility expected of the physician." This truly covers a large territory, because as physicians people will expect a lot of you. Your conduct in the cafeteria, your gross cadaver talk in the elevator, and sometimes even your gross cadaver smell, will be very appalling to others.

The second premise states: "I shall consider medical knowledge as providing the basis for the practice of the Art, realizing that falsely claiming mastery of this knowledge reveals an attitude which severely jeopardizes the patient and which is incompatible with the attitude of a physician." The hardest thing for many of you will be to realize that you don't know and can't possibly learn everything. It is not only in the best interest of your own sanity, but especially in the best interest of your patients that you learn to ask questions. Incidents which relate to this may be funny or serious. A student that I know quite well was asked to describe the eye he was seeing through his ophthalmoscope. After a brilliant description of the optic disc and arteries coming from it, he was told he had just looked into a glass eye. Similarly, a patient who was told she had terminal ileitis became very depressed. It was finally explained to her that "terminal" only meant the end portion of her ileum and not the end of her life.

The third premise is as follows: "I shall view my instructors, my colleagues, and this School of Medicine as sources of training and inspiration in the Science and Art, respecting their knowledge, appreciating their counsel, and jealously guarding the privilege of extending the knowledge to those who follow." The way you will practice medicine four years from now will stem from your own judicious assimilation of the many varied and different opinions to which you will be exposed. Inspiration in the learning process may rear its head in the form of poignant evaluations from faculty which, to our often fragile egos, seem like unnecessary "put downs." After studying long and hard hours, it will take all the integrity and self-confidence you can muster to view objectively yourself as being on a never-ending search for knowledge.

The fourth and foremost premise states: "Above all, I shall consider with compassion the patients who are under my care, and I shall labor to alleviate their disease and suffering to the utmost of my ability." You will be expected to regard your patients with respect and confidentiality. It will be your duty to listen to them intently and nonjudgmentally. It will not be enough for you to know the pathophysiology and proper treatment of congestive heart failure unless you can administer your knowledge with gracious humility.

Although the spirit of the honor code which I have just described lies in the practice of clinical medicine, some of its more pragmatic aspects apply to the first two years of basic science study. We are fortunate here to be on the pass-fail system. This past June, I did a senior elective at another school where the graded system was competitively in use. I was amazed to see that the students hardly knew each other. The atmosphere here is much different. The esprit de corps, the mutual suffering and mutual rejoicing will soon become apparent to you. You are on your honor to be only in competition with yourself and your own abilities. You are trusted to perpetuate honesty among yourselves by being designated your own watch dogs. There will be no almighty proctor standing over you as you take tests. . . .

The only security you have in life is the security you create for yourself. We can help.

PETER S. WHITE, CLU

ROBERT G. DUNNAVANT, CLU

DAVID E. HADEN

Tax Favored Retirement Plans! Life Insurance Disability Income

WRITE OR CALL

Pete White, Bob Dunnavant, or Dave Haden

Suite 807 Charleston National Plaza

Charleston, W. Va. 25301

304 - 343-8871

Name_____ Address_____

Connecticut Mutual Life

THE BLUE CHIP COMPANY • SINCE 1846

White Agency, Peter S. White, CLU, General Agent

Third-Party News, Views and Program Concerns

• Prepared by state government agencies involved in health care, and other third-party organizations.

Billing Improvement Program Started By Nationwide

Nationwide Insurance Company, the Part B Medicare Carrier serving the states of West Virginia and Ohio, has instituted a billing improvement program designed to generate more accurate, efficient. and timely processing of Medicare claims.

Known as Medicare Preferred Billers, the program is available to most physicians, regardless of whether or not the Medicare assignment is routinely accepted.

To participate, Nationwide has explained, a physician becomes involved with the carrier and the patient in the processing procedure by completing the Medicare claim form, including the use of procedure codes and a vendor code. All codes are assigned by the carrier and can generally be made available on request.

The program has these tangible benefits for the physician, patient and carrier, Nationwide said:

1. The physician benefits from an improved cash flow and consistency of allowed charges on assigned claims, and fewer letters requiring additional information on both assigned and unassigned claims. Also, if the physician's office prepares the claim form utilizing the codes assigned him by Nationwide, it will protect the integrity of his profile and assure maximum allowance permitted by law.
2. The patient can rest assured that his claim will be properly submitted and the maximum benefit paid.
3. The carrier receives a better product which can be processed at a lower administrative cost. This, of course, means a savings to the taxpayer.

"Nationwide believes that the Preferred Billers Program will produce results pleasing to the physician, his billing personnel, and his patients," the company explained. Physicians interested in learning more should contact Don F. Harper, District Medicare Manager, Holiday Plaza — Bridgeport, P. O. Box 8, Clarksburg 26301, phone (304) 842-5697; or Randall S. Swecker, District Medicare Manager, 1207-11 Quarrier Street, P. O. Box 3183, Charleston 25332, phone (304) 346-0411.

Claims Deadline Near

Meanwhile, Nationwide-Medicare has advised that physicians should now complete and forward all Medicare claims, or remind their Medicare patients to do so, in order to receive all available benefits.

There is a filing deadline for claims for medical services provided from October 1, 1974, to September 30, 1975. They can be paid only if mailed and delivered to Nationwide prior to year-end, 1976.

Also, some patients lose their carryover credit by holding claims until the $60 deductible credit has been accumulated. Each year, when accumulated medical bills do not total $60 they should be sent in—because, in such cases, bills from fourth-quarter services will also apply toward next year's deductible.

Additionally, claims forwarded before the holiday mail rush traditionally will receive more prompt service than those claims arriving with the December-February mail avalanche.

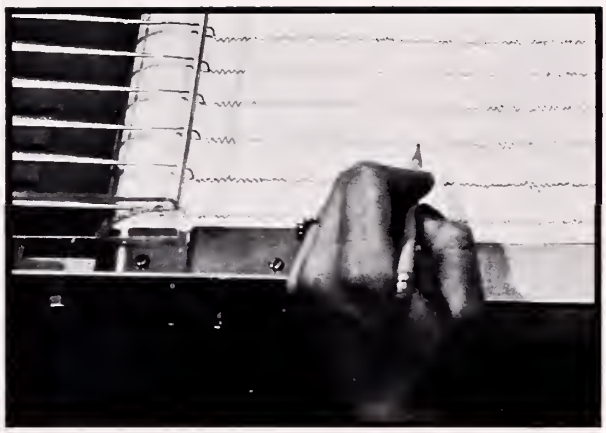
Production, Delivery Of Flu Vaccine Immense Task

The United States "is probably the only country in the world which can both produce and deliver vaccine to all citizens," Dr. N. H. Dyer, State Health Director, said in a recent issue of "State of the State's Health."

"The immensity of this task," Doctor Dyer continued," is evident from the delay in manufacturing the vaccine and the time it takes to administer this vaccine to the entire population.

"Influenza in epidemics spreads very rapidly, and there is not time to wait for a demonstrated spread of the disease to give the vaccine. Antibiotics may be helpful, but in the influenza pandemic of 1918 citizens developed pneumonia and died within 12 hours. Even modern antibiotics do not prove efficacious in that time and, of course, no antibiotic is effective against the 'flu' virus.

"In any project as massive as universal influenza vaccination, many questions are bound to arise. The dose of vaccine, type of vaccine, and age of patients receiving vaccine are but a few. The West Virginia State Health Department will gladly attempt to answer such questions."



Saint Albans Psychiatric Hospital

A fully accredited private psychiatric hospital for the treatment of all major psychiatric illnesses including alcoholism and drug abuse problems of adolescents and adults.

Radford, Virginia 24141
Telephone 703 639 2481

Obituaries

LEO E. CHRISTIAN, M. D.

Dr. Leo E. Christian, a Huntington family physician for 42 years before his retirement in 1971, died on August 17 in a hospital there. He was 75.

A native of Wayne County, Doctor Christian received his M. D. degree in 1929 from the University of Louisville School of Medicine. He interned at Memorial Hospital in Huntington.

Doctor Christian served in the U. S. Navy from 1920 to 1922 before entering medical school. His son, Dr. Homer Lee Christian, is in practice now in the office of his father at 1166 Adams Avenue in Huntington.

He was a member of the Cabell County Medical Society, the West Virginia State Medical Association, the American Medical Association, and the West Virginia Chapter, American Academy of Family Physicians.

Additional survivors include the widow; three sisters, Mrs. Sidney Osburn of Kenova and Miss Juanita Christian and Mrs. Carol Crabtree, both of Hendersonville, North Carolina; and two brothers, Russell E. Christian, Georgetown, Massachusetts, and Raymond Christian, Grayson, Kentucky.

* * *

KARL J. MYERS, M. D.

Dr. Karl J. Myers, a radiologist and one of the founders of the Myers Clinic and Myers Clinic Hospital in Philippi, died on September 13 in a hospital there. He was 77.

Doctor Myers, with his father and brother, founded the Philippi clinic and hospital in 1933.

Certified by the American Board of Radiology in 1939, Doctor Myers was the founder of the first degree educational programs in radiologic technology and was Director of the Alderson-Broaddus College program for 30 years in Philippi.

Doctor Myers received his undergraduate education at the Broaddus Academy in Philippi and West Virginia University, earning his M. D. degree in 1923 from the University of Maryland School of Medicine. His postgraduate work was at the Chicago Eye, Ear, Nose and Throat Hospital, Columbia University, New York Post Graduate Hospital, and the New York Polyclinic.

Doctor Myers was a Fellow of the American College of Radiology, and a member of the Radiological Society of North America, the American Roentgen Ray Society, the Pennsylvania Radiological Society, of which he was a Past Secretary, Treasurer and President; and the Pittsburgh Roentgen Society, of which he was a Past Vice President.

He was a Past President of the West Virginia Thoracic Society, the Barbour County Tuberculosis

(Continued on Page xvi)

BRIEF SUMMARY OF
PRESCRIBING INFORMATION
ANTIMINTH ® (pyrantel pamoate)
ORAL SUSPENSION

Actions. Antiminth (pyrantel pamoate) has demonstrated anthelmintic activity against *Enterobius vermicularis* (pinworm) and *Ascaris lumbricoides* (roundworm). The anthelmintic action is probably due to the neuromuscular blocking property of the drug.

Antiminth is partially absorbed after an oral dose. Plasma levels of unchanged drug are low. Peak levels (0.05-0.13μg/ml) are reached in 1-3 hours. Quantities greater than 50% of administered drug are excreted in feces as the unchanged form, whereas only 7% or less of the dose is found in urine as the unchanged form of the drug and its metabolites.

Indications. For the treatment of ascariasis (roundworm infection) and enterobiasis (pinworm infection).

Warnings. *Usage in Pregnancy:* Reproduction studies have been performed in animals and there was no evidence of propensity for harm to the fetus. The relevance to the human is not known.

There is no experience in pregnant women who have received this drug.

The drug has not been extensively studied in children under two years; therefore, in the treatment of children under the age of two years, the relative benefit/risk should be considered.

Precautions. Minor transient elevations of SGOT have occurred in a small percentage of patients. Therefore, this drug should be used with caution in patients with preexisting liver dysfunction.

Adverse Reactions. The most frequently encountered adverse reactions are related to the gastrointestinal system.

Gastrointestinal and hepatic reactions: anorexia, nausea, vomiting, gastralgia, abdominal cramps, diarrhea and tenesmus, transient elevation of SGOT.

CNS reactions: headache, dizziness, drowsiness, and insomnia. Skin reactions: rashes.

Dosage and Administration. *Children and Adults:* Antiminth Oral Suspension (50 mg of pyrantel base/ml) should be administered in a single dose of 11 mg of pyrantel base per kg of body weight (or 5 mg/lb.); maximum total dose 1 gram. This corresponds to a simplified dosage regimen of 1 ml of Antiminth per 10 lb. of body weight. (One teaspoonful=5 ml.)

Antiminth (pyrantel pamoate) Oral Suspension may be administered without regard to ingestion of food or time of day, and purging is not necessary prior to, during, or after therapy. It may be taken with milk or fruit juices.

How Supplied. Antiminth Oral Suspension is available as a pleasant tasting caramel-flavored suspension which contains the equivalent of 50 mg pyrantel base per ml, supplied in 60 ml bottles and Unitcups™ of 5 ml in packages of 12.

ROERIG Pfizer

A division of Pfizer Pharmaceuticals
New York, New York 10017

One swallow does it

eliminates Pinworms and Roundworms with a single dose

- **Single dose effectiveness against both pinworms and roundworms**— The only single-dose anthelmintic effective against pinworms *and* roundworms.
- **Nonstaining** — to oral mucosa, stomach contents, stools, clothing or linen.
- **Well tolerated** — the most frequently encountered adverse reactions are related to the gastrointestinal tract.
- **Economical** — a single prescription will treat the whole family.
- **Highly acceptable** — pleasant-tasting caramel flavor.
- **Convenient** — just 1 tsp. for every 50 lbs. of body weight. May be taken without regard to meals or time of day.

ROERIG Pfizer
A division of Pfizer Pharmaceuticals
New York, New York 10017

Please see prescribing information on facing page. NSN 6505-00-148-6967

Antiminth® ORAL SUSPENSION
(pyrantel pamoate) equivalent to 50mg pyrantel/ml

(Continued from Page xiv)

and Health Association; and the West Virginia State Tuberculosis and Health Association.

Doctor Myers, who had a long association with Alderson-Broaddus College, served as a member of the Board of Trustees and as Trustee Secretary. He had served as President of the College's Alumni Association for the past 15 years.

He also was a member of the Tygart's Valley Medical Society, the West Virginia State Medical Association, the American Medical Association, the American Thoracic Society and the American Society of Nuclear Medicine.

Survivors include the widow; one son, Dr. Karl J. Myers, Jr., Philippi; one daughter, Dr. Evangeline Poling, Philippi; and one brother, Dr. Hu C. Myers, Philippi.

* * *

MARGARET B. BALLARD, M. D.

Dr. Margaret B. Ballard of Union, in Monroe County, died on September 25 in a Charleston hospital. She was 76.

Doctor Ballard was a graduate and former faculty member of the University of Maryland School of Medicine. She retired in 1965.

She is survived by two nephews, Michael Clark of Union and Tom Chandler of Greenville, and several cousins.

Radiology:
H. P. Kurella, M. D.

Pathology:
Fulvia Franyutti, M. D.

Surgery:
Hu C. Myers, M. D.
A. Kyle Bush, M. D.
J. W. Waadfard, M. D.
A. Richard Weaver, M. D.

Gynecology and Obstetrics:
Raymond W. Cronlund, M. D.

Internal Medicine:
E. G. Guy, M. D.
B. G. Thimmappa, M. D.
Karl J. Myers, Jr., M. D.
Amitava Ghosal, M. D.

Pediatrics:
E. G. Kreider, M. D.
J. M. Nissley, M. D.

Dentistry:
Glenn B. Poling, D. D. S.

Lonnie L. Crane
Administrator

THE MYERS CLINIC
Philippi, West Virginia

LIBRIUM®
(chlordiazepoxide HCl)
5 mg, 10 mg, 25 mg capsules

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Relief of anxiety and tension occurring alone or accompanying various disease states.

Contraindications: Patients with known hypersensitivity to the drug.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (e.g., operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported.

***Usage in Pregnancy:* Use of minor tranquilizers during first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.**

Precautions: In the elderly and debilitated, and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (e.g., excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

Adverse Reactions: Drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally, making periodic blood counts and liver function tests advisable during protracted therapy.

Supplied: Librium® Capsules containing 5 mg, 10 mg or 25 mg chlordiazepoxide HCl. Libritabs® Tablets containing 5 mg, 10 mg or 25 mg chlordiazepoxide.

ROCHE
Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

County Societies

MERCER

The Mercer County Medical Society met on September 20 at the University Club in Bluefield.

Dr. David C. Sabiston, Jr. from the Department of Cardiovascular Surgery, Duke University, spoke on surgical procedures concerning major blood vessels and the heart.

The Swine Flu vaccination program was discussed by Dr. N. Allen Dyer, and Dr. Silva Jean B. Neilson was appointed to represent the Society on an Advisory Committee to The Board of Health of Mercer County for the vaccination program.

The Society approved a joint meeting between the Mercer County Bar Association and the Society in January, 1977—primarily to discuss malpractice. —David F. Bell, Jr., M. D., Secretary-Treasurer.

* * *

CABELL

The Cabell County Medical Society met on September 9 at the Gateway Inn in Huntington.

Participating in a panel discussion on the progress of the Marshall University Medical School were Dr. Robert B. Hayes, Marshall President; Robert W. Coon, M. D., Dean of the Marshall University Medical School, and Carlton Smith, Director of the Huntington Veterans Administration Hospital. The panel also answered questions.—Colin M. Craythorne, M. D., Secretary.

* * *

McDOWELL

The McDowell County Medical Society met on September 8 at the Stevens Clinic Hospital in Welch.

Interesting cases of diverticulitis were presented by Dr. Robert W. Hansen, a surgeon at the hospital. The cases presented the frequent complications of the surgical treatment of diverticulitis.

Doctor Hansen stressed that surgery may be indicated if the patient cannot be treated medically, if obstruction and/or infection supervenes, or if persistent bleeding occurs. He also presented a patient who had developed a fecal fistula following surgery for diverticulitis and the problems incurred in the treatment of this.—Arthur A. Carr, M. D., Secretary.

* * *

MONONGALIA

The Monongalia County Medical Society met on September 7 at the Old Mill Club in Morgantown.

Dr. John J. Mahood of Bluefield, President of the West Virginia State Medical Association, was the speaker. Doctor Mahood spoke on the accomplishments of the State Medical Association in the past and plans for the future.

There were 75 members and 11 guests present, including Mrs. Mahood and Mrs. George H. Khoury. —H. Summers Harrison, M. D., Acting Secretary.

* * *

CENTRAL WEST VIRGINIA

The Central West Virginia Medical Society met on September 9 in Richwood.

Dr. Clemente Diaz of Richwood presented a film on "The Heimlich Maneuver," the treatment for patients who have choked.

Amendments to the State Constitution for retired and honorary members were read to the group.

The proposed requirements of the AMA Physician's Recognition Award for continued membership in the West Virginia State Medical Association were discussed. It was recommended to Dr. Louis W. Groves, Jr., member of the State Council from Richwood, that continued membership in the American Academy of Family Physicians be accepted as sufficient evidence rather than requiring the Physician's Recognition Award, too.

Dr. C. R. Davisson of Weston announced the beginning of an educational program at Stonewall Jackson Memorial Hospital in conjunction with West Virginia University on the third Thursday of each month.—Joseph B. Reed, M. D., Secretary.

There's a 1-in-33 chance you'll have a mentally retarded baby.

Here's how to lower the odds.

Write for a free pamphlet from the National Association for Retarded Citizens, P.O. Box 6109, Arlington, Texas 76011

Name _____

Address _____

City _____

State _____ Zip Code _____

"This space contributed by the publisher as a public service."

Book Review

ANNUAL REVIEW OF ALLERGY—1974—Edited by Claude Albee Frazier, M. D. Medical Examination Publishing Company, Inc., Flushing, N. Y. 442 Pages. 1975. Price $15.

This book represents the third consecutive attempt to review the entire current field of allergy and present it in one volume. Forty-nine authorities in the field of allergy and clinical immunology have contributed to the subject matter contained in 31 chapter headings. It encompasses all of the important aspects of theory and practice of allergy and clinical immunology, including discussions of surgery and dentistry in the allergic patient and allergy in the dog.

With a yearly deadline and 49 contributors a certain amount of lack of uniformity of quality and/or format will occur. Each chapter usually begins with an introductory statement presenting the general concept of the particular subject followed by reviews of recently published articles with an occasional editorial comment on subjects of particular interest. References are freely presented to allow the reader to review the article in its complete form.

Several of the chapters should be cited for being of particular interest to all physicians, such as those on the subject of drug allergy, and reactions to hidden drugs and sublingual testing with certified food colors.

Doctor Frazier is to be commended for attempting to bring so much information together in a single annual volume as this represents the only annual review of allergy which is published in the English language. Despite the shortcomings of any such multi-offered publication, the information contained in the volume should serve to fill a void in the knowledge of physicians who do not frequently study the allergy literature as part of their usual reading. This is of particular importance at a time when medical publications have reached their peak in numbers whereas the 24 hour day is still the limit to our reading. The small size of the type used in the volume is a disadvantage.

Every medical library should have the Annual Review of Allergy—1974 available to its users. The busy practitioners who are interested in allergy would also benefit from its use.—Merle S. Scherr, M. D.

Change of Address

Members of the West Virginia State Medical Association are requested to notify the headquarters offices promptly concerning any change in address. Notices should be mailed to Box 1031, Charleston, West Virginia 25324.

BLUEFIELD SANITARIUM CLINIC

525 BLAND STREET
BLUEFIELD, W. VA.

ANESTHESIOLOGY
DAVID H. GATHERUM, M.D.

EMERGENCY SERVICE
S. K. CHOPRA, M.D.
B. P. BHASIN, M.D.

GASTROENTEROLOGY
LOUISE A. OWENS, M.D.

INTERNAL MEDICINE
H. F. WARDEN, M.D.
C. D. PRUETT, M.D.
R. O. ROGERS, M.D.

LABORATORY MEDICINE
DAVID F. BELL, JR., M.D.
JOHN J. BRYAN, M.D.

NEUROSURGERY
WILLIAM F. HILLIER, M.D.
E. L. GAGE, JR., M.D.
ADNAN SILK, M.D.

NUCLEAR MEDICINE
C. D. PRUETT, M.D.
R. O. ROGERS, M.D.

OB. & GYN.
CHARLES S. FLYNN, M.D.
T. KEITH EDWARDS, M.D.

OPHTHALMOLOGY
F. D. WHITE, M.D.

ORTHOPEDICS
EDWARD M. LITZ, M.D.

PEDIATRICS
GRADY McRAE, M.D.
E. M. SPENCER, M.D.

ROENTGENOLOGY
GEORGE C. KING, M.D.
JOHN A. ANZIULEWICZ, M.D.

THORACIC & VASCULAR SURGERY
ROBERT W. NEILSON, JR., M.D.
JAMES P. THOMAS, M.D.

UROLOGY
STEVE J. MISAK, M.D.

ADMINISTRATOR
JAMES L. FOSTER

DECEMBER
1976

Vol. 72 No. 12

The WEST VIRGINIA Medical Journal

Official Organ of the West Virginia State Medical Association

Box 1031 Charleston, W. Va. 25324

EDITOR EMERITUS
George F. Evans, M. D.
Clarksburg
1900-1976

EDITOR
Stephen D. Ward, M. D. (1977)
Wheeling

MANAGING EDITOR AND BUSINESS MANAGER
Mr. Charles R. Lewis
Charleston

EXECUTIVE ASSISTANT
Mr. Custer B. Halliday
Charleston

ASSOCIATE EDITORS
E. J. Van Liere, M. D. (1976)
Morgantown
John M. Hartman, M. D. (1978)
Charleston
Vernon E. Duckwall, M.D.(1979)
Elkins
Thomas J. Halbrook, M.D.(1980)
Huntington
Joe N. Jarrett, M. D. (1982)
Oak Hill

Published monthly by the West Virginia State Medical Association under the direction of the Publication Committee. Original articles are accepted on condition that they are contributed solely to The Journal.

Entered as second-class matter January 1, 1926, at the post office at Charleston, West Virginia, under the act of March 3, 1879.

Subscription Rates: $10 a year in the U.S.A.; $15 in foreign countries; $2 per single copy. Advertising rates furnished on request. Address all communications to Business Manager, The West Virginia Medical Journal, Box 1031, Charleston, West Virginia 25324. Phone 346-0551.

Microfilm editions beginning with the 1972 volume are available from University Microfilms, Inc., 300 N. Zeeb Road, Ann Arbor, Michigan 48106.

Member 1976

CONTENTS

Scientific Articles

Asbestosis in West Virginia and Eastern Ohio—John A. Bellotte, M. D.; and Dominic J. Gaziano, M. D. 341

Liver Biopsy With The Vim Tru Cut Needle—Rafael Antonio Ortiz, M. D.; P. H. Garcia Pont, M. D.; Pedtro Lorenzi, M. D.; Donald Vazquez, M. D.; Jorge Melendez, M. D.; Arturo Acosta, M. D.; and Carlos Rubio, M. D. 345

Spontaneous Recanalization of Vas Deferens—Bhasker R. Pujari, M. D.; and Gopal M. Pardasani, M. D. 348

The President's Page

Winter Is Not All Bad—John J. Mahood, M. D., President, W. Va. State Medical Association 352

Editorials

Mid-Winter Program 'Bigger and Better' 353

Review A Book 353

Consumerism 354

Sugarplums 1976 354

General News

Conference Program Nears Completion 355

Continuing Education Activities 357

Caribbean Tour Announced 357

Huntington Doctors Elected to Legislature 358

Governor's Physician Nominations Confirmed 358

Special Departments

WVU Medical Center News viii

Third-Party News, Views, Program Concerns x

Obituaries xii

County Societies xiv

Woman's Auxiliary xvi

Review A Book xvii

1976 Annual Index xxiv

Classified Section xxvii

Index To Advertisers xxviii

respond to one

According to her major symptoms, she is a psychoneurotic patient with severe anxiety. But according to the description she gives of her feelings, part of the problem may sound like depression. This is because her problem, although primarily one of excessive anxiety, is often accompanied by depressive symptomatology. Valium (diazepam) can provide relief for both—as the excessive anxiety is relieved, the depressive symptoms associated with it are also often relieved.

There are other advantages in using Valium for the management of psychoneurotic anxiety with secondary depressive symptoms: the psychotherapeutic effect of Valium is pronounced and rapid. This means that improvement is usually apparent in the patient within a few days rather than in a week or two, although it may take longer in some patients. In addition, Valium (diazepam) is generally well tolerated; as with most CNS-acting agents, caution patients against hazardous occupations requiring complete mental alertness.

Also, because the psychoneurotic patient's symptoms are often intensified at bedtime, Valium can offer an additional benefit. An *h.s.* dose added to the *b.i.d.* or *t.i.d.* treatment regimen can relieve the excessive anxiety and associated depressive symptoms and thus encourage a more restful night's sleep.

Valium® (diazepam) IV

2-mg, 5-mg, 10-mg scored tablets

in psychoneurotic anxiety states with associated depressive symptoms

surveillance because of their predisposition to habituation and dependence.

***Usage in Pregnancy:* Use of minor tranquilizers during first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.**

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

ROCHE

Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

THERE ARE A LOT OF PEOPLE GETTING BETWEEN YOU AND YOUR PATIENT.

Medicine today is in the spotlight, subjected to all kinds of scrutiny. Your control over patient therapy is being monitored, judged and occasionally abrogated, sometimes by unknown third parties.

The worry is that in the wake of this focus, the relationship between you and your patient will be weakened, without offsetting benefits. Consider three examples:

Drug substitution In most states, pharmacy laws, regulations or professional custom stipulate that your non-generic prescriptions be filled with the precise products you prescribe. But in the last five years, a dozen or more State laws have been changed, permitting the pharmacist in most cases to select a product of the same generic drug to fill any prescription.

Ironically, this dilution of physician control has taken place against a background of growing evidence that purportedly equivalent drug products may be inequivalent, since neither present drug standards nor their enforcement are optimal. In fact, the FDA itself says it has not enforced the same standards for hundreds of "follow-on" products that it had applied to the original NDA approvals. Thus physician control over patient therapy is being eroded with a risk that patients may be exposed to drugs of uncertain quality.

The major advertised claim for substitution is reduced prescription prices for consumers. Yet no documentation of any significant savings has been produced.

MAC Maximum Allowable Cost, MAC for short, is a Federal regulation designed to cut the Government's drug bill by setting price ceilings for drugs dispensed to Medicare and Medicaid patients. Unless the prescriber certifies on the prescription that a particular product is medically necessary, the Government intends to pay only for the cost of the lowest-priced, purportedly-equivalent, generally-available product. The effect of the program may be that elderly and indigent patients will be restricted to products which someone in Washington believes are priced right. Practicing doctors will have little to say about administration of the program, since Government will have absolute authority to make its choices stick.

The drug lag The future of drug and device research depends upon a scientific and regulatory environment that encourages therapeutic innovations. The American pharmaceutical industry annually is spending more than $1 billion of its own funds and evaluating more than 1,200 investigational compounds in clinical research. Disease targets include cancer, atherosclerosis, viruses and central nervous system disorders, among others. But there is a major barrier to the flow of new drugs to your patients: The cost of the research is more than ten times what it was, per product, in 1962; and whereas governmental clearance of new drug applications took six months then, it commonly consumes two years now.

The FDA needs adequate time, of course, to consider data. But it is equally clear that the present approval process contributes to needless delay of needed therapy. That's why the increased efficiency of the drug approval process is vital to all our futures.

If these issues concern you, we suggest that you make your voice heard—among your colleagues and your representatives in State legislatures and in Washington.

It could make a difference in your practice tomorrow.

P·M·A

Pharmaceutical Manufacturers Association
1155 Fifteenth Street, N.W., Washington, D.C. 20005

WVU Medical Center
—News—

• Compiled from material furnished by Mrs. Mary Ellin Wylie, Director, Medical Center News and Information Services, Morgantown, W. Va.

THOMAS MICHAEL SODEMAN, M. D., has been named Professor and Chairman, Division of Clinical Pathology, Department of Pathology, West Virginia University School of Medicine.

Doctor Sodeman came to WVU from the University of Michigan, where he had served on the faculty since completing his residency there in 1972. Born in New Orleans, he received his B. S. degree from the College of William and Mary and was graduated from the University of Virginia Medical School.

Thomas M. Sodeman, M. D.

After completing his internship at the University of North Carolina, he served two years as a research associate at the National Institute of Allergy and Infectious Diseases' Section of Primate Malaria in Chamblee, Georgia.

He has also served as a consultant to the World Health Organization at its Malaria Eradication Training Center of the Western Pacific Regional Office in Manila, Philippine Islands.

A Fellow of the American Society of Clinical Pathologists, the College of American Pathologists and the American College of Physicians, he is a member of the American Association for Microbiology, the American Society of Tropical Medicine, the International Academy of Pathology, Phi Chi medical fraternity and a number of other professional organizations.

Surgeons Join Faculty

Two associate professors have been named to the faculty of the Department of Surgery.

Ellen E. Hrabovsky, M. D., comes to WVU from Children's Hospital in Columbus, Ohio, where she served a three-year residency in pediatric surgery.

She is the first member of the WVU School of Medicine faculty to specialize in surgery for children.

Born in Lansing, Michigan, she is a graduate of Peabody College and Vanderbilt University School of Medicine. She served an internship at Ohio State University and a four-year residency in general surgery at Vanderbilt.

Charles W. Fedde, M. D., former staff general surgeon and Chief of Vascular Surgery at Fort Gordon, Georgia, was born in Fowler, Colorado, and educated at Augustana College in Sioux Falls, South Dakota, and at the University of Colorado Medical School.

His postgraduate training was received at Madigan General Hospital in Tacoma, Washington, at the U. S. Army Hospital in Fort Ord, California, and at Walter Reed General Hospital in Washington, D. C.

While at Fort Gordon, Doctor Fedde served as Assistant Clinical Professor of Surgery at the Medical College of Georgia in Augusta and as Vascular Surgery Consultant for the Army Medical Region Three.

Infectious Disease Specialist

A specialist in infectious diseases has been appointed assistant professor of medicine.

Roger Graham Finch, M. D., comes to WVU from St. Thomas' Hospital Medical School of the University of London where he was Lecturer and Senior Registrar in Clinical Microbiology.

He received his medical degree from the University of Birmingham and his postgraduate training in hospitals affiliated with that institution and the University of Bristol and at Hereford General and County Hospitals.

Named Clinical Assistant Professors

David Alan Kappel and James Durig, who received their M. D. degrees from WVU, have been named clinical assistant professors of surgery.

Doctor Kappel, a resident of New Martinsville when he entered WVU, recently began practice in Wheeling after completing a residency in plastic surgery at the University of Kansas Medical Center. Prior to that he had served a four-year residency in general surgery at the same institution and an internship at Swedish Hospital Medical Center of Seattle, Washington.

He is the co-author of several papers describing his current research written for professional journals including the *American Journal of Surgery, Plastic and Reconstructive Surgery* and the *Journal of Pediatric Surgery.*

Doctor Durig, who was born in Glen Dale, completed his residency in the Division of Urology, Department of Surgery, at the WVU Medical Center in July of this year. He is in the private practice of that specialty in the Wheeling area.

TAX FAVORED RETIREMENT PLANS!

PETER S. WHITE, CLU

ROBERT G. DUNNAVANT, CLU

DAVID E. HADEN

The only security you have in life is the security you create for yourself.

We can help.

WRITE OR CALL

Pete White, Bob Dunnavant, or Dave Haden

Suite 807 Charleston National Plaza

Charleston, W. Va. 25301

304 - 343-8871

Name_____ Address_____

Connecticut Mutual Life

THE BLUE CHIP COMPANY • SINCE 1846

White Agency, Peter S. White, CLU, General Agent

Third-Party News, Views and Program Concerns

• Prepared by state government agencies involved in health care, and other third-party organizations.

Review Panels Proving Valuable In Liability Program

Panels of physicians established by the State Medical Association to review selected claims filed under the Association's professional liability program are functioning effectively, recent information provided chairmen of the panels by Aetna Life and Casualty has indicated.

As of November 1, 15 cases had been reviewed by the panels under the current structure implemented early in 1976. Five more were about ready for review. Physician review recommended that seven of the claims be defended, and the other eight be settled. Again as of November 1, six of the eight had been settled at amounts below what Aetna had anticipated.

This has been interpreted by Aetna as a "clear indication" of the panels' value in providing defense counsel with more professional and related information on which to proceed. Aetna also has reported "feedback from the panel members to the effect that they, too, are learning from their review experiences and are doing some things differently . . ."

The review panels represent the core of the loss control and education component of the Association's liability program, with major emphasis assigned to knowledge gained by physicians of the sources and types of claims which develop.

In a further effort to make the review arrangement more effective, and particularly to cut down necessary travel for physicians, the Association recently established a fifth panel embracing the eastern counties of Mineral, Grant, Pendleton, Hampshire, Hardy, Morgan, Berkeley and Jefferson, with Dr. H. Alexander Wanger of Martinsburg as Chairman.

Additional information provided by Aetna included this data, likewise as of November 1:

—Pending malpractice claims numbered 61, with the reserve established for them amounting to $1,382,357. More than $346,000 was paid by Aetna in settling claims in the year's first 10 months. The increase in both cost and frequency of claims moderated somewhat in the first three quarters of 1976, but this experience can fluctuate significantly.

—A study, completed in August, of all claims reported to that time under the Medical Association program, now in its fourth full year, showed that the greatest number, 25 per cent, involved general surgeons, followed by: general practice, 23 per cent; obstetrics and gynecology, 11 per cent, and orthopedic surgery, 8 per cent.

—Unexpected death accounted for 14 per cent of the claims. The area of birth control constituted the procedure most frequently reflected in claims. Other procedure categories, in descending order, were diagnostic x-rays, hysterectomies, fracture repairs, cancer treatment, catheterizations and gall bladder surgery.

—Forty-two per cent of the claims alleged errors in actual treatment; 21 per cent charged missed diagnosis; 8 per cent medication errors, and 5 per cent involved foreign objects.

NCI Calling Physician Attention To Pamphlet On DES

The National Cancer Institute, National Institutes of Health, is offering to physicians an informational pamphlet on the subject of diethylstilbestrol (DES) exposure *in utero*.

"This information is very important to every physician in this country who is at all likely to be contacted concerning DES exposure *in utero*," the NCI noted.

The NCI's Division of Cancer Control and Rehabilitation is directing a study in four institutions, called the DESAD project, of DES-associated vaginal and cervical irregularities and the rare instances of clear-cell adenocarcinoma that occur in DES-exposed daughters.

The pamphlet—"Information for Physicians—DES Exposure *In Utero*," answers questions physicians and patients are now asking, according to the NCI. The DES-type drugs that may have been prescribed to pregnant women are listed. A bibliography is included.

This publication and two others on this subject are available without charge, the other ones being "Questions and Answers About DES Exposure Before Birth" and "Were You or Your Daughter Born After 1940?".

For any of the three publications write Office of Cancer Communications, Department WV, Building 31, Room 10A19, National Cancer Institute, NIH, Bethesda, Maryland 20014.

NVPL

Northern Virginia Pathology Laboratories

11091 Main Street
Fairfax, Virginia
Phone: (703) 273-7400

NOW AVAILABLE

PARATHYROID HORMONE ASSAY

(includes calcium, magnesium and phosphorus determinations)

OTHER RIA ASSAYS AVAILABLE

ACTH
Aldosterone
Anti-DNA
Carcinoembryonic Antigen
Chorionic Gonadothrophin, Beta Subunit
Chorionic Somatomammotrophin
Cortisol
Cyclic AMP
11-Desoxycortisol
Dexamethasone Receptor Assay
Digitoxin
Digoxin
Dihydrotestosterone
Dihydrotestosterone Receptor Assay
Estradiol Receptor Assay
Estriol
Estrogens, Fractionated
Estrogens, Total
Estrone
Follicle Stimulating Hormone
Folate
Gastrin
Gentamycin
Growth Hormone
Hepatitis Associated Antigen
Immunoglobulin E
Insulin
Luteinizing Hormone
Progesterone
Progesterone Receptor Assay
Prolactin
Renin
T3 Resin Uptake
T3-RIA
T4-RIA
Testosterone
Thyroid Stimulating Hormone
Vitamin B12

NORTHERN VIRGINIA PATHOLOGY LABORATORIES is a full-service laboratory, operated and supervised by pathologists, and dedicated to providing prompt and accurate results.

GENTLEMEN: PLEASE SEND ME

- ☐ A Copy of Your Professional Service Manual
- ☐ A Copy of Your Capabilities Brochure
- ☐ Parathyroid Hormone Information

Name

Address

Obituaries

HOWARD A. SWART, M. D.

Dr. Howard A. Swart, Charleston orthopedic surgeon, died on October 16 in a hospital there. He was 74.

A native of Simcoe, Ontario, Canada, Doctor Swart practiced in Welch before going to Charleston in 1935.

He received his medical degree in 1926 from the University of Toronto Faculty of Medicine and a Master of Science Degree in Orthopedic Surgery in 1931 from the University of Minnesota. He interned at Buffalo (New York) City Hospital in 1926-27, served a residency at the Hospital for the Ruptured & Crippled in New York City in 1927-28, and was a Fellow in Orthopedic Surgery at the Mayo Foundation in Rochester, Minnesota, from 1928 to 1934. He was certified in 1935 by the American Board of Orthopaedic Surgeons.

A veteran of World War II, Doctor Swart was a Member Emeritus of the American Academy of Orthopaedic Surgeons, Fellow of the American College of Surgeons; and a member of the Kanawha Medical Society, the West Virginia State Medical Association, the American Medical Association and the Southern Medical Association. He was a charter member and officer of the Tri-State Orthopedic Society.

Survivors include the widow; two sons, Howard A. Swart, Jr., of Annapolis, Maryland, and James A. Swart of Charleston; and a sister, Miss Madeline Swart of Simcoe.

* * *

A. M. PRICE, M.D.

Dr. A. M. Price, Madison eye, ear, nose and throat specialist, died on November 6 at his home there. He was 80.

Doctor Price received his M. D. degree in 1924 from the University of Louisville School of Medicine, and did postgraduate work in 1944 at the Memphis (Tennessee) Eye and Ear Infirmary. Formerly located in Charleston, he moved to Madison in 1946.

Doctor Price was an honorary member of the Boone County Medical Society, the West Virginia State Medical Association and the American Medical Association.

Surviving are three sisters, Mrs. Electa Kuhn of Van, Mrs. Ruby Freishette of Charleston and Mrs. Nancy Dickens of Naoma.

* * *

JAMES R. GLASSCOCK, M. D.

Dr. James R. Glasscock, Richwood family physician and general surgeon, died on November 1 at his home there. He was 65.

Doctor Glasscock practiced in Richwood for 31 years and was a member of the staff of Sacred Heart Hospital there. Born in Marmaduke, Arkansas, and formerly of Fallon, Nevada, he was graduated from St. Louis University and received his M. D. degree in 1935 from the University of Arkansas School of Medicine.

He served for five years with the U. S. Army Medical Corps during World War II, was a retired flight surgeon with the West Virginia National Guard, and was awarded the Distinguished Service Medal.

Doctor Glasscock was a member of the West Virginia Chapter, American Academy of Family Physicians; the Society of Abdominal Surgeons, the Central West Virginia Medical Society, the West Virginia State Medical Association and the American Medical Association.

Survivors include the widow; two sons, John Glasscock of Newark, Delaware, and Bill Glasscock of Richwood; a stepdaughter, Miss Rebecca Nardella of Richwood; and a sister, Mrs. Ruth Erb of Fallon.

Rehabilitation Assn. Honors Dr. J. R. Woodford

Dr. J. R. Woodford, Philippi family physician, was presented a Certificate of Honor by the West Virginia Rehabilitation Association during a recent meeting of the Tygart's Valley Medical Society.

Doctor Woodford, in addition to his regular practice, has provided comprehensive rehabilitation services to handicapped people over a period of 40 years.

Radiology:
H. P. Kurella, M. D.

Pathology:
Fulvio Franyutti, M. D.

Surgery:
Hu C. Myers, M. D.
A. Kyle Bush, M. D.
J. W. Woodford, M. D.
A. Richard Weaver, M. D.

Gynecology and Obstetrics:
Raymond W. Cronlund, M. D.

Internal Medicine:
E. G. Guy, M. D.
B. G. Thimmappa, M. D.
Karl J. Myers, Jr., M. D.
Amitava Ghosal, M. D.

Pediatrics:
E. G. Kreider, M. D.
J. M. Nissley, M. D.

Dentistry:
Glenn B. Poling, D. D. S.

Lonnie L. Crane
Administrator

THE MYERS CLINIC
Philippi, West Virginia

GROUP INSURANCE

Officially sponsored by

WEST VIRGINIA STATE MEDICAL ASSOCIATION

SOUND PROTECTION

at a

SUBSTANTIAL SAVING IN COST

Please Send Me Descriptive Brochure On—

☐ **LONG TERM DISABILITY INCOME PROTECTION**
(Pays you a regular monthly benefit up to $2,000 per month when you are disabled)

☐ **$15,000 MAJOR HOSPITAL PLAN**
Covers you and your family up to $15,000 per person

☐ **LOW-COST LIFE INSURANCE**
In units of — $10,000 - $20,000 - $30,000 - $40,000 - $50,000

☐ **$100,000 ACCIDENTAL DEATH & DISMEMBERMENT INSURANCE**
Around the clock protection — 24 hours a day . . . 365 days a year . . . world wide

☐ **OFFICE OVERHEAD DISABILITY POLICY**
(Pays your office expense up to $3,500 per mo. while you are disabled)

☐ **A MUTUAL FUND PROGRAM**
Designed to qualify under HR-10

☐ **A MILLION DOLLAR CATASTROPHE LIABILITY POLICY**
(Covers: Malpractice—Home—Personal—Auto Liability)

Name _____ Address _____

MAIL TO: ADMINISTRATOR
McDONOUGH-CAPERTON-SHEPHERD-GOLDSMITH
P. O. BOX 1551 CHARLESTON, W. VA. (25326)

NOTE: A full time service representative travels the State and is always available for personal consultation. Your Resident Administrator provides complete service here in the State including processing and payment of claims.

County Societies

MONONGALIA

The Monongalia County Medical Society met on October 5 at the Elks Club.

The speaker was Mr. Doug Wall of Charleston, Account Supervisor, Aetna Life and Casualty Company, whose topic was "West Virginia State Medical Association Medical Malpractice Insurance Program." He reviewed the experience in West Virginia relative to malpractice and noted some of the ways in which litigation can be prevented.

In addition to a quorum of members, there were a number of guests present, including several of the candidates for the State Legislature.—Barbara Jones, M. D., Secretary.

* * *

CABELL

The Cabell County Medical Society met on October 14 at the Gateway Inn in Huntington.

Dr. Maurice A. Mufson, Chairman of the Department of Medicine at the Marshall University Medical School, gave a fascinating talk on pneumonia, followed by discussion.

Larry Thompson, Executive Director of The Community Mental Health Center, the guest speaker, discussed the structure and function of that organization.

Dr. Charles H. McKown, Jr., the President, announced he will invite area medical students to attend the various conferences and meetings in our hospitals.

Dr. James A. Heckman gave a report on the area physician review panel set up under the State Medical Association's group professional liability insurance program with Aetna Life & Casualty Company.

Dr. John F. Otto spoke on the significance of multiple health agencies and the Society again went on record unanimously recommending multiple health agencies in preference to a single health agency in the State.—Colin M. Craythorne, M. D., Secretary.

* * *

MERCER

The Mercer County Medical Society met on October 11. Dr. Guy Odom, Professor of Neurosurgery at Duke University, presented the scientific program on the progress of ancillary procedures in the diagnosis of neurosurgical problems. He gave a historical review of air encephalography, arteriography and radioisotope administration for localization of cerebral lesions, and then described in detail the use and results of CAT scanning at Duke.

The matter of honorary memberships in the Society was discussed in line with the recent changes in the West Virginia State Medical Association Constitution, with a committee appointed to bring back recommendations.

The status of the Swine Flu vaccination program was reviewed, and Dr. Silva Jean B. Neilson discussed the teenage pregnancy program in West Virginia.—David F. Bell, Jr., M. D., Secretary.

BLUEFIELD SANITARIUM CLINIC

525 BLAND STREET

BLUEFIELD, W. VA.

ANESTHESIOLOGY
DAVID H. GATHERUM, M.D.

EMERGENCY SERVICE
S. K. CHOPRA, M.D.
B. P. BHASIN, M.D.

GASTROENTEROLOGY
LOUISE A. OWENS, M.D.

INTERNAL MEDICINE
H. F. WARDEN, M.D.
C. D. PRUETT, M.D.
R. O. ROGERS, M.D.

LABORATORY MEDICINE
DAVID F. BELL, JR., M.D.
JOHN J. BRYAN, M.D.

NEUROSURGERY
WILLIAM F. HILLIER, M.D.
E. L. GAGE, JR., M.D.
ADNAN SILK, M.D.

NUCLEAR MEDICINE
C. D. PRUETT, M.D.
R. O. ROGERS, M.D.

OB. & GYN.
CHARLES S. FLYNN, M.D.
T. KEITH EDWARDS, M.D.

OPHTHALMOLOGY
F. D. WHITE, M.D.

ORTHOPEDICS
EDWARD M. LITZ, M.D.

PEDIATRICS
GRADY McRAE, M.D.
E. M. SPENCER, M.D.

ROENTGENOLOGY
GEORGE C. KING, M.D.
JOHN A. ANZIULEWICZ, M.D.

THORACIC & VASCULAR SURGERY
ROBERT W. NEILSON, JR., M.D.
JAMES P. THOMAS, M.D.

UROLOGY
STEVE J. MISAK, M.D.

ADMINISTRATOR
JAMES L. FOSTER

"The quality of mercy..."

That's your concern.

The quality of protection. That's Ætna Life & Casualty's concern.

And that's why Ætna has created a library of video tapes for your education. Potential sources and causes of malpractice. Even suggestions as to how claims might be prevented. What's more, you can get credit hours for viewing them! Check the list below:

"DO NO HARM"

For physicians and hospitals. Involves the four most vulnerable areas in the hospital for malpractice claims. (Color)

"NURSES, RELATED PROFESSIONS, MALPRACTICE"

Primarily pertains to nurses responsibilities as well as problems they may encounter in their practice.

"CAUSES AND PREVENTION OF MEDICAL MALPRACTICE"

Comprehensive coverage of studies made in various specialty fields. Goes into many causes of malpractice and some suggestions on how malpractice may be avoided.

"ELECTRICAL HAZARDS IN HOSPITALS"

Gives physicians, nurses and technical personnel some basic knowledge of electrical equipment in a hospital and the dangers that electricity can cause there.

"COULD THIS BE YOU?"

Shows a physician violating all principles in the handling of a patient . . . and flashbacks to proper technique. (Color)

If any of these tapes are of interest to you or your local association, please contact:

Douglas Wall
Ætna Life & Casualty
516 Charleston National Plaza
Charleston, West Virginia 25301

Ætna
LIFE & CASUALTY

You get *action* with Ætna

Woman's Auxiliary

to the

WEST VIRGINIA STATE MEDICAL ASSOCIATION

President: Mrs. J. L. Mangus, Charleston
President Elect: Mrs. J. T. Mallamo, Fairmont
Vice President: Mrs. Robert J. Reed III, Triadelphia
Eastern Regional Director: Mrs. Charles E. Andrews, Morgantown
Northern Regional Director: Mrs. Harry S. Weeks, Jr., Wheeling
Western Regional Director: Mrs. Gary G. Gilbert, Huntington
Southern Regional Director: Mrs. T. Keith Edwards, Bluefield
Central Regional Director: Mrs. Joseph A. Smith, Dunbar
Treasurer: Mrs. Charles S. Harrison, Clarksburg
Recording Secretary: Mrs. D. Sheffer Clark, Huntington
Corresponding Secretary: Mrs. Thomas J. Janicki, Charleston
Parliamentarian: Mrs. M. Bruce Martin, Huntington

HANCOCK

The September meeting of the Woman's Auxiliary to the Hancock County Medical Society was held at the summer cottage of Dr. and Mrs. Leonard Yurko near Independence, Pennsylvania.

Mrs. Emil Capito, President, conducted the business session.

Mrs. George Kosar, hostess for October, discussed the October meeting which was to be held in the Doctors' Dining Room of the Weirton General Hospital. Charles Okey was to discuss the new medical library. The Auxiliary started the library in the Weirton General Hospital and has added to it since its inception.

Plans were made for the annual dance which will be held in February in the Knights of Columbus Hall, with Mrs. Ray Greco as Chairman.

* * *

HARRISON

Martin Faust, Chairman of the Harrison County United Fund Campaign, spoke to the Woman's Auxiliary to the Harrison County Medical Society at its meeting on October 9.

The September meeting of the Auxiliary was held at the home of Dr. and Mrs. William Connelly of Clarksburg, with an after-luncheon dessert.

Rose corsages were presented to visiting State Auxiliary officers: Mrs. J. L. Mangus, Charleston, President; Mrs. Joseph T. Mallamo, Fairmont, President Elect; and Mrs. Harry S. Weeks, Jr., Wheeling, Northern Regional Director.

Mrs. Phillip Hall, President, presided over a brief business meeting.

* * *

KANAWHA

The Woman's Auxiliary to the Kanawha Medical Society met in September at the home of Dr. and Mrs. Robert L. Ghiz.

Sid Crim, Vice President and General Manager of Beckley Newspapers, spoke on "The Press Today, The Continuing Challenge."

General and Thoracic Surgery
Stephen T. J. Lee, M. D.
James A. Gardner, M. D.

Orthopedics
Clifford A. Stevenson, M. D.
S. A. Zahir, M. D.
Mario C. Ramas, M. D.
George Orphanos, M. D.

Obstetrics-Gynecology
A. Ray Jacobson, M. D.
Mariamma Abraham, M. D.

Ophthalmology
Edward T. Liu, M. D.

Urology
S. L. Francis, M. D.

Southern West Virginia Clinic

Stanaford Road, P. O. Box 50
Beckley, West Virginia 25801
Phone (304) 252-7331

Internal Medicine
Preston C. Davis, M. D.
Joseph A. Maiolo, M. D.
Eugene Warvariv, M. D.
R. James Yates, M. D.
S. L. Bembalkar, M. D.
R. Randolph Powell, M. D.

Pediatrics
P. B. Gogo, M. D.
Raquel S. Israel, M. D.

Radiology
Thomas L. Martin, M. D.

Clinic Manager
James P. Bland

Guests included Mrs. J. L. Mangus of Charleston, President of the Woman's Auxiliary to the West Virginia State Medical Association; and Mrs. J. T. Mallamo of Fairmont, President Elect.

It was announced that a workshop for making Christmas ornaments was to be held later in the month at the home of Mrs. Carol Velasquez, and that the Auxiliary's "Make or Bake" auction was scheduled for October at the Governor's mansion.

Mrs. J. Dennis Kugel announced that nurses and clerks were needed to help with the county's Swine Flu immunization program.

Mrs. W. A. Thornhill, Jr., discussed the Gift of Life project sponsored by the Kidney Foundation.

* * *

OHIO

The Woman's Auxiliary to the Ohio County Medical Society held a membership coffee honoring new members in October at the home of Mrs. Edgar L. Barrett, with Mrs. William E. Ackermann serving as Chairman.

New Auxiliary members include Mrs. Jack Yost, Mrs. Charles Porter, Mrs. James Durig, Mrs. S. S. Sohn, Mrs. Henry Kettler, Mrs. Paul Hedges, Mrs. Albert Jellen, Mrs. Larry Dodd and Mrs. J. W. Burech.

Mrs. Joseph Aceto is Membership Chairman for the Auxiliary.

Review A Book

The following books have been received by the Headquarters Office of the State Medical Association. Medical readers interested in reviewing any of these volumes should address their requests to Editor, *The West Virginia Medical Journal,* Post Office Box 1031, Charleston 25324. We shall be happy to send the books to you, and you may keep them for your personal libraries after submitting to *The Journal* a review for publication.—Editor

Current Pediatric Diagnosis and Treatment, 4th Edition, by C. Henry Kempe, M.D.; Henry K. Silver, M. D.; and Donough O'Brien, M. D. 1,053 Pages. Illustrated. Price $15.00. Lange Medical Publications, Los Altos, California 94022. 1976.

Plagues and Peoples by William H. McNeill. 369 Pages. Price $10.00. New York, Doubleday & Company, Inc. 1976.

Review of Medical Pharmacology, 5th Edition, by Frederick H. Meyers, M. D.; Ernest Jawetz, Ph. D.; and Alan Goldfien, M. D. 740 Pages. Illustrated. Price $12.50. Lange Medical Publications, Los Altos, California 94022. 1976.

Basic and Clinical Immunology edited by H. Hugh Fudenberg, M. D.; Daniel P. Sites, M. D.; Joseph L. Caldwell, M. D.; and J. Vivian Wells, M. D. 653 Pages. Illustrated. Price $12.50. Lange Medical Publications, Los Altos, California 94022. 1976.

NEW!
Welch Allyn
Halogen Diagnostic Set

- Twice the light intensity of conventional instruments
- Twice the life between lamp replacements
- Superior color fidelity—closer to natural sunlight
- Higher percentage of initial output throughout lamp life
- Distinctive black chrome rechargeable battery handles

WELCH ALLYN
WELCH ALLYN, INC.
Skaneateles Falls, N. Y. 13153

Ask for a demonstration.

HOSPITAL & PHYSICIANS SUPPLY CO.
511 BROOKS STREET 344-3554
CHARLESTON, WEST VIRGINIA

Change of Address

Members of the West Virginia State Medical Association are requested to notify the headquarters offices promptly concerning any change in address. The 1977 Roster of Members will be prepared and placed in the mails shortly after the first of the year and we would very much like for your correct address to appear in same. Notices should be mailed to Box 1031, Charleston, West Virginia 25324.

CONFERENCES FOR MEDICAL PROFESSIONALS

Over 500 listings of national/ international meetings, conferences and seminars in the medical sciences for 1977. Send a $10.00 check or money order payable to Professional Calendars, P. O. Box 40083, Washington, D. C. 20016.

There's a 1-in-33 chance you'll have a mentally retarded baby.

Here's how to lower the odds.

Write for a free pamphlet from the National Association for Retarded Citizens, P.O. Box 6109, Arlington, Texas 76011

Name _____

Address _____

City _____

State _____ Zip Code _____

"This space contributed by the publisher as a public service."

THE WHEELING CLINIC

EOFF AT 16th STREET

WHEELING, WEST VIRGINIA

General Surgery:
J. O. Rankin, M. D.
C. D. Hershey, M. D.
E. C. Vass, M. D.

Ophthalmology:
W. F. Park, M. D.
M. E. Nugent, M. D.
R. V. Pangilinan, M. D.

Ear, Nose & Throat:
W. A. Tiu, M. D.
A. G. Matadar, M. D.
J. K. Tan, M. D.

Orthopedic Surgery:
E. L. Barrett, M. D.
R. S. Glass, M. D.

Thoracic Surgery:
Daniel W. Dickinson, M. D.

Obstetrics and Gynecology:
Robert W. Leibold, M. D.
Robert T. Brandfass, M. D.
A. Athari, M. D.
J. W. Campbell, M. D.

Urology:
D. C. Trapp, M. D.

Dermatology:
K. W. Watersan, M. D.
Sheldan Widlan, M. D.

Internal Medicine:
Charles H. Hiles, M. D.
Albert M. Valentine, M. D.
T. E. Chvasta, M. D.
B. L. Van Pelt, M. D.
P. R. Hedges, M. D.
C. L. Beall, M. D.
C. A. Vasquez, M. D.

Psychiatry:
Stephen D. Ward, M. D.
David Hill, M. D.
David H. Smith, M. D.

Neurology:
Albert L. Wanner, M. D.
Henry L. Kettler, M. D.

Roentgenology:
Drs. Butler, Aceta & Assocs.

Speech Pathologist and Audiologist:
James P. Frum, M. S.

Clinical Laboratories:
Danna Burlenski
Donna Bryan

Physician Assistants:
Joann Green, P. A.
Michael G. Siman, P. A.

Technologists:
Electrocardiography:
Betty Maguire, R. N.
Brenda Muklewicz, R. N.
Electroencephalography:
Juanita Stone, R. N.
Roentgenology:
Evelyn Farester, R. T.

Administration:
Lester L. Cline, Manager
Henry L. Castilow, Asst. Mgr.

The West Virginia Medical Journal

Vol. 72, No. 1 January, 1976

Syphilitic Aneurysms With Bone Erosion And Rupture

Roland J. Weisser, Jr., M. D.; and Robert J. Marshall, M. D.

There has been, and there continues to be, a dramatic decrease in the incidence of syphilitic aortitis. Thus, while Welty[1] found an autopsy incidence of 6.9 per cent in 1939, Heggtveit,[2] studying an otherwise similar municipal hospital population, found an incidence of only 0.8 per cent in 1964. Boyd,[3] in the seventh edition of *Pathology for the Physician*, said: "In previous editions of this book (I stated) 'Syphilis is generally acknowledged to be one of the most important causes of arterial disease.' How far this is from being the truth at the present day every reader must know. It is a striking instance of the changing picture of disease."

The declining incidence of aortitis is explained in part by the routine use of serological tests that facilitate recognition and treatment of asymptomatic disease, and in part by the use of adequate treponemacidal doses of penicillin.[4] Thus, despite an increasing incidence of primary syphilis since about 1970, reversing the previous trend, there is every expectation that within another one or two decades complicated aortitis will become very rare.[5]

Occasionally, patients slip through the net, either because they failed to see a doctor in time, or because the treatment they received, and their follow-up, was inadequate. This unfortunately gives one the opportunity to witness the dramatic terminal manifestations of syphilitic aortitis that were not uncommon in the prepenicillin era. We report two such cases.

Case Reports

Case 1. J. G. (H24-62-67), a 72-year-old retired glass factory worker, was referred to the cardiac clinic for evaluation of complaints of intermittent blurred vision and orthostatic faintness. He had fallen three times. His wife also felt that his memory was failing. He had been treated intermittently for hypertension during the preceding six years; and, although he denied a history of venereal disease, he had received 2.4 million units of Benzathine penicillin in 1964 when his family physician found that his VDRL reaction was positive in a dilution of 1:8.

The Authors

- **Roland J. Weisser, Jr., M. D., Assistant Professor, Department of Family Practice; and Robert J. Marshall, M. D., Professor and Chairman, Division of Cardiovascular Diseases, West Virginia University School of Medicine, Morgantown.**

The blood pressure was 145/95 mm. Hg and the heart rate was irregular. There was a short early systolic ejection murmur in the aortic area but no diastolic murmur. No abnormal pulsations were felt. Dullness to percussion was elicited posteriorly over the upper lobe of the left lung. The voice was not altered. Pupillary reactions were normal. There was no evidence of peripheral neuropathy, posterior column dysfunction, or disorganization of joints. A chest film showed egg-shell calcification of the ascending aorta, an enormous calcified saccular aneurysm of the aortic arch, and an apparently separate aneurysmal dilatation near the origin of the brachiocephalic artery (Figure 1a). The ECG showed atrial premature beats and complete right bundle branch block. The VDRL reaction was positive in a dilution of 1:2. The remaining laboratory tests were normal.

Thoracic aortography was performed by the percutaneous, transfemoral approach. This confirmed the presence of a very large aneurysm, apparently lined with thrombus and involving the distal portion of the arch, together with dilatation near the origin of the brachiocephalic artery. There was no aortic valve reflux. The extent of the disease precluded any attempt at surgery (Figure 1b).

Two weeks later he came to the emergency room, complaining of the sudden onset of dys-

pnea, orthopnea and an unproductive cough. He denied pain, but was obviously dyspneic. The jugular veins were distended; there was proto-diastolic gallop rhythm; and the lungs were moist. The ECG showed irregular atrial tachycardia with ventricular premature beats and complete right bundle branch block. As he was being wheeled into his room, he suddenly developed ventricular fibrillation. Although this was abolished by electric counter-shock, no effective circulation could be restored and he was pronounced dead.

At necropsy, the large aneurysm measured 15x13x9 cm. There was a small rupture in its posterolateral portion. It was densely adherent to the thoracic vertebrae, which had to be block-sawed to permit removal of the aneurysm. The anterior portions of several vertebrae had been severly eroded by the aneurysm. The smaller aneurysm at the root of the brachio-cephalic artery measured 5x5 cm. There was diffuse coronary atherosclerosis with several plaques compromising the lumina of the coronary arteries by 50 per cent or more. The heart was enlarged (525g.).

Case 2. G. P. (H27-37-12) was a 60-year-old man. A year before admission he complained of chest pain. A chest film showed an aneurysm of the ascending aorta; however, he refused further investigations or treatment. He gave no history of venereal disease or penicillin treatment. A week prior to his transfer to the West Virginia University Medical Center he started to bleed through a fistula in the center of the sternum. In his local hospital, bleeding was controlled by the tight application of sterile dressings to the anterior chest wall. Attempts to change these resulted in further brisk bleeding; therefore, more and more dressings were applied and bound down tightly. With the passage of time these became saturated with altered blood and an offensive odor developed.

On transfer, he was pale and sweating profusely; although the limbs were cold, the blood pressure was 150/90 mm. Hg. The pupils were small and irregular and did not react to light (Argyll-Robertson pupils). The chest was concealed by a thick layer of dressings soaked with foul-smelling altered blood: these were left in place. The layer of dressings pulsated, and through them a systolic murmur was audible. The ECG showed sinus tachycardia. The hemoglobin, due to blood loss from the aorto-cutaneous fistula, was reduced to 60 g./L.

Although the prospects for surgical intervention seemed remote, aortography was performed by the percutaneous, transfemoral route. This demonstated a very large calcified aneurysm of the ascending aorta with the sac extended through the sternum (Figures 2a and 2b). The aortic valve was displaced downward and there was moderately severe aortic reflux. The quality of the angiograms was less than optimal because of the thick layer of dressings surrounding the front and sides of the chest.

Angiography was well tolerated; however, 12 hours later he developed a sudden, complete, left-sided hemiplegia. His condition rapidly deteriorated until he died.

An enormous aneurysm of the ascending aorta, containing 75 g. thrombus, was found at ne-

Figure 1a (left). Postero-anterior chest film (Case 1). Note the large saccular aneurysm of the aortic arch and the separate aneurysm near the origin of the brachio-cephalic artery. Figure 1b. Retrograde aortogram, left anterior oblique position (Case 1). The aneurysm is partially filled with thrombus.

Figure 2a. Aortogram, antero-posterior projection (Case 2). The aneurysm is in the ascending aorta.

cropsy. It had eroded the sternum and produced pressure necrosis of the overlying skin. A small hole in the superficial portion of the aneurysm was the source of the external blood loss. There was extensive infarction of the left cerebrum, including the frontal and parietal cortices, the internal capsule and the basal ganglia.

Histological examination showed extensive hyalinization and calcification of the aortic wall. There was heavy infiltration of lymphocytes and plasma cells in the adventitia, particularly around the vasa vasorum. Special strains showed fragmentation of the elastica and replacement by fibrous tissue. The appearances were characteristic of chronic luetic aortitis. Histological features of complicating arteriosclerosis were also present.

Discussion

These two cases provide vivid illustrations of the terminal manifestations of syphilitic aortitis.

Case 1 did not admit to a history of primary syphilis. His family physician had found a positive VDRL reaction on routine examination in 1964, and had treated him with 2.4 million units of Benzathine penicillin. Unfortunately, a chest film was not obtained then. While 2.4 million units is an adequate treponemacidal dose for primary or secondary syphilis, it is now recommended that larger doses should be given for late syphilis; for example, 3.0 million units of Benzathine penicillin G once weekly for three doses.[3] Therefore, in retrospect, his treatment (although the dose was that generally recommended a decade ago) was too little and too late.

Case 2 was too ill to give any history on transfer to our hospital. The note that came from his local hospital, however, denied any history of syphilis or penicillin treatment.

The importance of the early diagnosis of syphilis and of its prompt treatment with adequate doses of penicillin (or other antibiotics in the event of penicillin sensitivity) is obvious. In patients in whom late syphilis is suspected, chest films should be obtained. Egg-shell calcification of the ascending aorta is highly suggestive of syphilitic aortitis. The syphilitic aneurysm is characteristically saccular and may occur in any part of the thoracic aorta, particularly the arch. When it is very large, there may be radiological evidence of erosion of the thoracic ver-

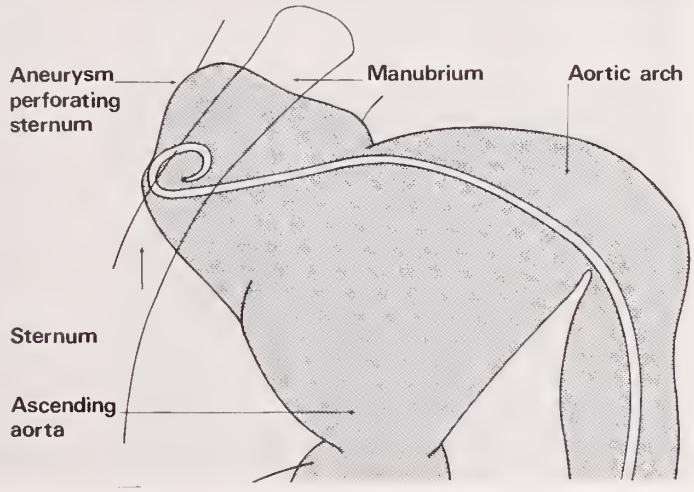


Figure 2b (with line diagram). Aortogram, lateral projection (Case 2). The aneurysm has eroded through the sternum. Note the tip of the pigtail catheter against the anterior wall of the aneurysm.

tebrae or sternum, and the trachea, bronchi or esophagus may be compressed.

The aneurysm in Case 1 involved the aortic arch. In this site, any structure in or adjacent to the superior mediastinum may be compressed, depending on the size and precise location of the aneurysm. A subclavian artery may be compressed, leading to differences in pulse and blood pressure between the two upper limbs. Pressure on the left bronchus may result in collapse of the upper lobe of the left lung; downward traction on the trachea during systole may be felt as a "tracheal tug." Pressure on the trachea may lead to cough and stridor; pressure on the recurrent laryngeal nerve may paralyze the left vocal cord, resulting in a brassy cough; pressure on the left sympathetic chain may cause Horner's syndrome; and pressure on the thoracic nerve roots may cause severe girdle pains.

Vigorous pulsation to the right or left of the sternum or in the supra-sternal fossa is characteristic of an aneurysm of the ascending aorta, and it is often accompanied by a loud systolic bruit and thrill. The pulsation was so vigorous in Case 2 that it was readily transmitted through a layer of dressings two inches thick. A muffled systolic bruit was heard on auscultation through the dressings, but these "damped out" the early diastolic murmur that would otherwise have been audible in view of the aortic valve reflux demonstrated during aortography. Aneurysm of the ascending aorta may compress or occlude the superior vena cava, resulting in distension of the jugular and brachial veins and edema of the neck, face and arms. Less commonly, it may compress the right pulmonary artery.

Death most often results from exsanguination due to a spontaneous rupture in the aneurysm. In Case 1, however, death resulted from ventricular fibrillation and cardiac arrest due to severe coexistent coronary artery disease. Although a small area of rupture was found at necropsy, there was little bleeding from this and the tear may have resulted from futile efforts at cardio-pulmonary resuscitation.

In Case 2, the aneurysm had eroded through the sternum and ruptured, resulting in an arterio-cutaneous fistula. Despite attempts to stop the bleeding by the application of many layers of dressings held in place by tight bandages, it continued, and at the time of transfer to this hospital the patient was severely anemic, pale and sweating. While blood loss contributed to his death, the immediate cause was a massive stroke that was probably due to cerebral embolism.

Large aneurysms of the aorta usually contain thrombus. This may become dislodged spontaneously, resulting in systemic embolism, or portions may be dislodged during the manipulation of an angiographic catheter. To minimize the latter risk, it is our practice to use pigtail rather than straight-tip catheters for aortic catheterization when an aneurysm is known or suspected to be present. Aortic catheterization was uneventful in both cases. Twelve hours later in Case 2, however, the patient developed a sudden and profound hemiplegia, probably due to embolism. Whether this was spontaneous or related in some way to the preceding catheterization cannot be determined.

Erosion of the bone is uncommon. In Heggtveit's study[2] of 13,082 necropsies at Kings County Hospital, Brooklyn, there were 40 instances of syphilitic aortic aneurysm, but in only three was there bony erosion (vertebrae twice, sternum and ribs once). As previously noted, both cases described in this report had eroded bones: in Case 1, the aorta was so densely adherent to the eroded vertebrae that it could not be separated; while in Case 2 the full thickness of the sternum had been eroded.

Summary

Today, three decades after penicillin became available, syphilitic aortitis is an uncommon disease. Occasional patients, who have never had adequate treatment, develop syphilitic aneurysms of the thoracic aorta, and two examples are presented. In the first, a huge saccular aneurysm eroded the vertebral column and eventually ruptured. In the second, an ascending aortic aneurysm perforated the sternum and also ruptured, resulting in an aorto-cutaneous fistula. These cases stress the need for continued vigilance in the early detection and treatment of syphilis.

References

1. Welty, J. W.: A Necropsy Survey of Cardiovascular Syphilis with Particular Reference to its Decreasing Incidence. Am. J. Med. Sci. 197:782, 1939.
2. Heggtveit, H. A.: Syphilitic Aortitis. A Clinico-pathological Autopsy Study of 100 Cases, 1950 to 1960. Circulation. 29:346, 1964.
3. Boyd, W.: Pathology for Physician. Seventh Edition. Lee and Febiger, Philadelphia, 1965, p. 148.
4. Sparling, P. E.: Diagnosis and Treatment of Syphilis. New Eng. J. Med. 284:642, 1971.
5. Center for Disease Control: Summaries of Reported Cases of Infectious Syphilis. Mortality and Morbidity Weekly Report, Vol. 19, No. 39. The Center, Atlanta, Georgia, 1970, p. 360.

Gallbladder Anomalies With A Report Of A Double Gallbladder

Gopal M. Pardasani, M. D.

Congenital anomalies of the gallbladder are very rare and still more rare is the phenomenon of duplication of gallbladder and cystic duct. Boyden,[2] in his exhaustive study, "The Accessory Gallbladder in Man and Domestic Mammals," apparently was the first person to publish this interesting phenomenon. Double gallbladder is usually an incidental finding. With the recent development of demonstration of biliary tree by radiopaque materials, this anomaly is reported more often by radiologists than by surgeons or pathologists to whom it may appear as a single organ externally.[5]

This paper will present a brief review of recent literature and will include a case of double gallbladder associated with adult cystic teratoma of the ovary.

Case History

A 77-year-old white female was admitted on June 12, 1975, at 11:39 A. M. with a history of epigastric distress, occurring four to five days prior to admission. A general physician, prior to this admission, had diagnosed her as having "gallbladder problems." She was given medication and discharged. The distress in the epigastrium persisted and was accompanied by occasional severe, but not colicky pain. The laboratory data showed an elevated LDH, SGOT, Uric Acid, BUN and Glucose. CBC showed a total count of 14,500 with 85 per cent segmented neutrophils; Hemoglobin 10.9 gm. per cent; Hematocrit 32.5 per cent. EKG showed evidence of a posterior myocardial infarction. The patient was given routine symptomatic treatment with no relief. Around 11:15 P. M. on the day of admission the patient went into cardiac arrest, and cardiopulmonary resuscitative measures failed to revive her.

Autopsy showed acute myocardial infarction involving the left ventricle and the interventricular septum; additionally, very extensive and advanced coronary arteriosclerosis was discovered. An apparently benign dermoid cyst of the left ovary measuring 5 cm. in diameter was noted.

The Author

- **Gopal M. Pardasani, M. D., Pathology Department, Princeton Community Hospital, Princeton, West Virginia.**

Liver and Gallbladder

The liver had a smooth external surface. Two gallbladders were seen on the right inferior surface in a fossa. Upon initial examination, however, one probably would fail to identify two gallbladders due to the fact that both were covered with the same, smooth membranous sheath. Upon dissection, two separate gallbladders were discerned, with each one drained by its own cystic duct. Gallbladder No. 1 was in a lateral position while gallbladder No. 2 was medially situated (Figures 1 and 2).

Figure 1. Double gallbladder in situ, after removal of membranous sheath.

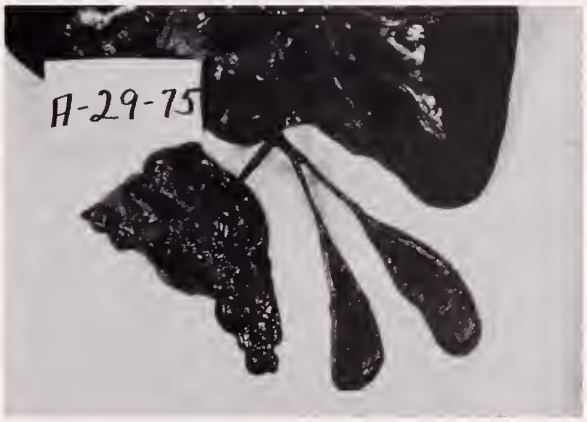


Figure 2. Dissected specimen, showing vesica fellea duplex, with Y-shaped cystic duct pattern.

The dimensions of each were as follows:

Gallbladder No. 1:

Length 8.4 cm.
Maximum width 2.8 cm.
Cystic duct 4.4 cm. (length)
0.4 cm. (width)

Gallbladder No. 2:

Length 8.7 cm.
Width 2.6 cm.
Cystic duct 4.8 cm. (length)
0.4 cm. (width)

Two cystic ducts joined to form a common channel (common cystic duct) which in its turn joined the common hepatic duct to form a common bile duct. The cystic ducts, thus, formed an inverted Y (人). Dimensions of the ducts were as follows: common cystic duct 2 cm. (length), 0.8 cm. (width); common hepatic duct 4.5 cm. (length), 0.4 cm. (width); and common bile duct 4 cm. (length), 0.6 cm. (width).

The common bile duct, joined by pancreatic duct, drained into the papilla of Vater. The extrahepatic biliary tree was free from calculi: the ducts were patent. The entire tree was visualized upon injection of radiopaque dye (Figure 3). The pancreas was within normal limits.

Discussion

While a fairly common phenomenon in animals, the duplication of the gallbladder in man is very rare. Boyden[2] reported some form of accessory gallbladder on an average of 1 in 8 cats; 1 in 28 calves; 1 in 85 sheep and lambs; and 1 in 198 pigs. In the same paper, 17 cases of double gallbladder in human beings were discussed. The exact incidence of anomalies of the gallbladder is difficult to judge because of sparsity of literature. Upon personal communication with anatomists, Boyden[2] collected two cases of double gallbladder in 9,221 cadavers and three in 9,970 patients. Reed and Carlberg[11] quote an incidence of one in 4,000 cases. By 1956, only 64 cases of double gallbladder had been reported in literature: eight of these were of the bilobular variety with a single cystic duct.[4] In 1958, Skielboe[14] collected 101 reports: 66 of which were encountered at surgery or on necropsy: 33 were of the ductal type, 11 of the Y-shaped type and one of the intermediate variety. To this Reed and Carlberg,[11] in 1961, added six additional cases from the literature and reported one of their own cases.

Figure 3. Extra hepatic biliary tree upon injection of radio-opaque material.

Embryology

The hepatobiliary tree is developed from a diverticulum which appears in the ventral wall of the primitive foregut as early as the fourth week of intrauterine life. While the upper portion differentiates to form the liver, the lower portion develops into the gallbladder, with both of these portions having their own ducts. The intermediate zone elongates to form the common bile duct in the future.

Initially, at the stage of 5 mm. embryo, the gallbladder and future biliary tree are without a lumen. On a later date, clefts appear at different levels and the canalization occurs. Should there appear no cleft or if there is no proper fusion of the clefts, an obliterated lumen evolves into a congenital anomaly. A ductal-type gallbladder arises from supernumerary buddings from the ducts; a bilobular gallbladder is derived from the subdivision of a primitive gallbladder bud; and the diverticular gallbladder results from existence of cavities and septa in the primitive bud. The number of cystic ducts differentiates the ductular from bilobular gallbladder. While in the ductular type there are two cavities, each drained by its own cystic duct, the bilobular gallbladder has only one cystic duct.[5]

Classification of Double Gallbladder

Since 1926, there has not been much alteration in the classification of this rare phenomenon. Boyden[2] classified this anomaly into three groups:

(1) *Vesica fellea divisa* (bilobular gallbladder). Incomplete duplication of the gallbladder occurs because only one cystic duct drains both vesicles. This group can be subclassified into the (a) Septal type in which the gallbladders appear single externally, while on dissection the vertical septum may be seen partially dividing the organ into two cavities; and (b) V-shaped type where the fundus and body of the gall-

bladder are divided into symmetrical or asymmetrical lobes with unification at the neck. This variety also has only one cystic duct.

(2) *Vesica fellea duplex* (double gallbladder with double cystic ducts). In this group there are two separate gallbladders, each being drained separately by its own cystic duct. Again, two subclasses can be identified: the (a) Y-shaped type in which two cystic ducts unite before entering into the common bile duct; and the (b) Ductal type in which each cystic duct drains separately into the common bile duct. Boyden[2] reported that the first example in a human being of the Y-shaped subclass was recorded by Huber in 1734.

(3) *Vesica fellea multiplex*—There are three separate gallbladders apparently being drained separately by a cystic duct. Naturally, this is a very, very rare phenomenon and has been reported by Skielboe,[14] Kelly[8] and Hause.[7]

In addition Gross[6] identified the following anomalies:

(1) *Diverticulum of the gallbladder.* Diverticulum could be situated anywhere along the surface of the organ as occasionally seen on radiology.

(2) *Agenesis of the gallbladder.* Absence of gallbladder or, in addition, aplasia of all or some portion of the hepatic or common duct system.

(3) *Miscellaneous malformations of the gallbladder.* Included in this group are hour glass gallbladder, phrygian cap gallbladder, rudimentary gallbladder, etc.

Double gallbladder has no distinct clinical symptomatology.[5] All varieties of pathology seen in the single gallbladder are encountered with double gallbladder.[3] Recht[10] reported a case of torsion of a double gallbladder and Raymond and Thrift[9] reported a case of carcinoma of the duplicated gallbladder.

Both gallbladders may contain stones and create a radiologic and urologic enigma.[1] X-ray examination may not show both gallbladders or may demonstrate only the normal vesicle and not the diseased one.[3] This may lead to removal of just the non-diseased gallbladder by surgeons and potentiate a medicolegal problem.[12]

Swett[15] has suggested that in cases of recurrent common duct stones after cholecystectomy, the possibility of double gallbladder should be kept in mind. Occasionally, cholelithiasis and cholecystitis affecting both organs are diagnosed clinically and treated surgically.[13]

Our case is interesting in the sense that in addition to the double gallbladder, this patient had an adult cystic teratoma of the ovary which was found to be benign. No such case has been encountered in this hospital (Princeton Community) on surgical exploration of 450 cases for gallbladder disease. Incidentally, this is the first case seen on autopsy at this hospital and at Beckley Appalachian Regional Hospital (in personal communication with Dr. Werner A. Laqueur) in a total of 2,753 autopsies.

Summary

A case of double gallbladder encountered incidentally at postmortem is presented. World literature and embryology of anomalies of gallbladder are reviewed in brief.

Acknowledgment

My sincere thanks are expressed to Dr. Ilona D. Scott, Chief Radiologist of this hospital, for her invaluable help in the radiological examination of this specimen.

References

1. Berndt, R., and Schmidt, K. The J. of Urology. 108: 209-210, 1972.
2. Boyden, E. A. The Am. J. of Anatomy. 38:177-231, 1926.
3. Dunkerley, D. R. Proceedings of Royal Society of Med. 57:331-332, 1964.
4. Flannery, M. G., and Caster, M. P. International Abstracts of Surgery, 1956, 103:439-457, 1956; in Surgery Gyn. and Ob., 1956.
5. Galambos, A., and Galambos, W. N. Am. J. of Gastroenterology. 23:129, 1955.
6. Gross, R. E. Archives of Surgery. 32:131-162, 1936.
7. Hause, W. A. Archives of Surgery. 79:144-145, 1959.
8. Kelly, A. R. Med. J. of Australia. 46:1, 124-126, 1959.
9. Raymond, S. W., and Thrift, G. B. Ill. Med. J. 110: 239-240, 1956.
10. Recht, W. British J. of Surgery. 39:342, 1952.
11. Reed, E. S., and Garlberg, D. J. of Indiana Med. Assn. 54:1780-1783, 1961.
12. Ryrberg, G. H. Acta Ghirurgery Scandanavica. 119, 36, 1960.
13. Simendinger, E. A.; Kruty, T. A., and Reodica, R. E. J. of AMA. 215:1823, 1971.
14. Skielboe, B. Am. J. of Glin. Path. 30:252-255, 1958.
15. Swett, G. E. J. of Maine Med. Assn. 64:72, 1973.

Non-Obstructive Bladder Dysfunction

Mark F. Roller, M. D.; Stanley J. Kandzari, M. D.;
And D. Franklin Milam, M. D.

Most voiding difficulties evaluated by the urologist, at least in the male, are due to obstructive uropathy secondary to benign prostatic hypertrophy. A smaller, yet significant number of patients develop bladder dysfunction on the basis of neuro-urologic abnormalities. These patients may present with voiding difficulties as the first and only symptom representing the onset of a systemic or local disease. The following cases provide an introduction to this topic.

The Authors

- **Mark F. Roller, M. D.; Stanley J. Kandzari, M. D.; and D. Franklin Milam, M. D., all from the Department of Surgery, Division of Urology, West Virginia University Medical Center, Morgantown.**

Case Reports

Case 1. N. L., a sixty-four-year-old white male, presented to the Urology Service at the Clarksburg Veterans Administration Hospital with a complaint of urinary and fecal incontinence of progressive severity over the previous eight to ten months. Approximately seven years prior to this admission, he had a lumbar laminectomy for disc disease. No myelogram was performed at that time. Three years before this admission, he had a transurethral resection of the prostate gland for benign obstructive disease and thereafter experienced marked improvement in his obstructive symptoms. He had been in good health until the onset of his current problems.

Physical examination was normal except for some marked perianal hypesthesia and complete absence of rectal sphincter tone. The prostatic fossa was flat. Deep tendon reflexes were normal.

A complete blood count, electrolytes, blood urea nitrogen, urinalysis, and urine culture were normal. An intravenous pyelogram revealed normal upper tracts but the post-voiding film demonstrated a large residual volume. On cystoscopy, there was no evidence of urethral stricture or recurrent obstructive prostatic hyperplasia and the bladder was not trabeculated. Cystometrogram revealed a bladder capacity in excess of 800 cc. without sensation of fullness and without significant rise in intravesical pressure.

The patient was transferred to the Neurosurgery Service at the Pittsburgh Veterans Administration Hospital where a myelogram and later exploration revealed a large ependymona of the cauda equina, which was resected. Postoperatively, the patient has done well and a repeat cystometrogram revealed the desire to void at 400 cc. The patient, however, was unable to produce significant intravesical pressure by detrusor contraction. Currently, he is emptying his bladder quite well by the Crede technique.

Case 2. H. P. (WVUH #22-87-54) was admitted to the Orthopedic Service at West Virginia University Hospital with a compression fracture of the first lumbar vertebra due to an automobile accident. He complained of back pain and decreased sensation in the right foot and over the lateral aspect of the right leg. There was also some weakness in the right leg and hypesthesia in the saddle area. The remainder of the physical examination and laboratory data, including urinalyses, were normal.

He experienced urinary retention and was catheterized for 1,500 cc. of urine; a Foley was left indwelling for two or three days. Upon removal of the catheter, he was again unable to void and was found to have over 1,000 cc. in his bladder. Cystoscopy was normal but a cystometrogram revealed a desire to void at 450 cc. with a voiding pressure of only 10 to 15 centimeters of water. At this time, the patient was taking Bethanecol hydrochloride (Urecholine) 20 milligrams three times a day. Further attempts to leave the catheter out resulted in retention and he was discharged with an indwelling catheter and suppressive medication consisting of methenamine mandelate and vitamin C, one gram each four times a day. He was seen in the urology clinic three weeks later and was able to void satisfactorily after removing the catheter. This propably represents an example of urinary retention due to spinal shock.

Normal Bladder Physiology and Function

The normal adult bladder capacity is between 350 and 450 cc. and the normal patient first has the desire to void at between 175 and 250 cc. Normal intravesical pressure during voiding is between 40 and 50 centimeters of water and results in a voiding volume of approximately 20 cc. per second. The normal delay between at-

tempting to void and first passing urine is between one and two seconds and one should be able to stop the stream voluntarily during the act of micturition. The detrusor muscle has the capacity of accommodation which allows it to accept urine until the bladder capacity is reached without a rise in intravesical pressure.

The detrusor muscle also possesses an inherent tone independent of nervous stimulation. Chronic distention much beyond bladder capacity, however, results in a decompensated bladder with loss of this muscle tone. Voiding occurs when intravesical pressure exceeds urethral resistance and urethral closing pressure. Intravesical pressure increases with detrusor muscle contraction, the Crede or Valsalva maneuver, cough or other causes for increased intra-abdominal pressure. Urethral resistance and closing pressure may be reduced by shortening the urethra which occurs as the bladder descends during micturition and by relaxation of the striated musculature of the pelvic floor. Hypesthesia in the saddle area (sacral nerve roots three through five) or absence of the bulbocavernosus reflex (contraction of the anal sphincter upon pinching the glans penis or the clitoris) suggests abnormality in the neuromuscular reflexes controlling micturition.

Abnormalities in Bladder Function Resulting from Surgery

Acute postoperative urinary retention is an event well known to all surgeons and may result from trouble voiding in the recumbant position, incisional pain caused by attempts to void, analgesic medications such as morphine, residual effects of spinal anesthesia, or reciprocal inhibitory impulses following such procedures as hemorrhoidectomy. These episodes are usually transient and are best treated by indwelling Foley catheters for the early postoperative period. An exception to their transient nature is arachnoiditis involving the cauda equina following spinal anesthesia. This usually occurs immediately but may on occasion arise after a prolonged asymptomatic interval.

Prior to radical pelvic surgery such as abdomino-perineal resection for carcinoma of the rectum or radical Wertheim hysterectomy for malignancy, a urologic evaluation consisting of an intravenous pyelogram, urethral calibration, endoscopy, and a cystometrogram is recommended.[1] Because of pelvic nerve injury, prolonged or permanent voiding difficulties occur in 29.2 per cent of abdomino-perineal resections for carcinoma of the rectum and the incidence is even higher in males (51.3 per cent).[2] Between 7.5 per cent and 35 per cent of the women undergoing a radical Wertheim hysterectomy will have difficulty voiding requiring catheter drainage of from two to eight weeks.[2] These patients must be encouraged to Crede or Valsalva with voiding attempts which should be done with regularity around the clock.

Orthopedic and Neurosurgical Factors In Bladder Dysfunction

Discogenic disease is reported to result in urinary disturbances culminating in an autonomous, decompensated bladder in from six to eighteen per cent of cases.[2] This is felt to be due to the pressure effect of the protruding herniated nucleus pulposus. Jones, et al. feel that the earliest effect of a central prolapse due to disc disease in the lumbosacral area may well be an uninhibited voiding pattern on cystometry with increased irritability of the bladder.[3] Spondylolisthesis may also cause bladder dysfunction.

Cerebrovascular accidents, brain tumors, and a variety of spinal cord diseases may cause an uninhibited neurologic bladder with urgency, frequency and decreased functional capacity. Compression fracture of the vertebral bodies with or without dislocation may cause permanent or temporary bladder dysfunction as may hyperextension injuries of the cervical spine. Vascular damage to the spinal cord following trauma or open heart surgery, or secondary to subarachnoid hemorrhage, be it spontaneous or secondary to anticoagulant therapy or hemophilia, may also compromise bladder function.[2] Epidural abscess, translumbar aortography with subsequent necrosis and demyelination of the ventral and lateral columns of the spinal cord and occasionally osteomyelitis of the spine are other rare causes.[2] Space occupying lesions of the spinal cord, cauda equina or filum terminale include ependymonas, astrocytomas and intramedullary gliomas. Sixty-eight per cent of these tumors present with pain but 2.6 per cent present solely with bladder or bowel dysfunction.[4]

Myelodysplasia

The most common form of myelodysplasia is meningomyelocele which usually involves the lumbosacral spinal cord and usually presents as a mass posteriorly. These children have a variety of severe problems including hydrocephalus and frequent congenital abnormalities of the hips such as dislocation and varying levels of paralysis of the lower extremities. The bladder may be of the uninhibited, spastic type with virtually no functional capacity and constant dribbling of urine, or of the autonomous, frequently decompensated type with overflow incontinence. With

sacral lesions, the pelvic floor is usually spastic; with higher lumbosacral lesions there is usually a relaxed pelvic floor.

These patients must be watched closely for signs of upper tract damage and are treated by a variety of methods including Crede voiding, intermittent catheterization, bladder pacemaker implantation, and urinary diversion. Other forms of myelodysplasia include spina bifida, short filum terminale, and various bony aplasias such as agenesis.

Inflammatory, Metabolic, and Infectious Causes Of Bladder Dysfunction

Multiple sclerosis most often presents initially with visual complaints but in two to twelve per cent of the cases, urinary difficulties may be the first symptom.[2] Seventy-eight per cent of patients with multiple sclerosis have urinary symptomatology at some time and this is persistent in 52 per cent.[2] Urinary tract dysfunction with infection, stone formation and renal failure represent a significant source of morbidity and mortality in these unfortunate patients.

A sensory paralytic bladder or hypotonic bladder may result from tabes dorsalis, pernicious anemia, progressive muscular atrophy, syringomyelia, or diabetes mellitus. If discovered early enough, these patients can often be helped by bladder rehabilitation with urecholine and by being taught to void regularly by the clock. One should be especially alert to pernicious anemia in patients who have had a total gastrectomy. Bladder dysfunction is not related to the severity or duration of diabetes and may indeed be the first presenting symptom in this disease.[3] Motor paralytic bladders occur with poliomyelitis, herpes zoster in which hypersensitive dermatomes of lumbar roots four and five include the perineum, and rarely with porphyria.

If the lesion is incomplete, urecholine may be of help. Patients with Parkinsonism may have hyperactive detrusor responses with urge incontinence, frequency and small residual urine volumes. These patients usually have a preponderance of skeletal muscular rigidity. Those with predominantly skeletal muscle tremor often have hypoactive bladder musculature with decreased desire to void, hesitancy, increased capacity and increased residual urine.

Miscellaneous Causes of Bladder Dysfunction

In children, acute urinary retention may be the result of fecal impaction.[6] 'Psychogenic urinary retention is not common but is much more frequent in women than in men.[7]

Various medications such as parasympatholytic agents (Pro-Banthine), meprobamate, diazepem, dilantin; and bronchodilators such as aminophylline, tedral, and quadrinal may precipitate urinary retention, especially if some obstructive component exists.[2]

Summary

There are many causes of urinary dysfunction other than obstructive uropathy which urologists as well as all physicians should consider in differential diagnosis. Urinary dysfunction may be the presenting complaint in any of these diseases and may prompt an evaluation leading to treatment of the primary problem at an early, and at times, curable stage. Additionally, it is important to monitor renal function and to institute treatment of bladder dysfunction before a decompensated bladder develops.

References

1. Lapides, Jack: Urologic Complications of Abdominal Perineal Surgery. Contemporary Surgery. 5:81, 1974.
2. Bors, Ernest, and Comarr, Estin A.: Neurological Urology. University Park Press, Baltimore, 1971, pp. 174-223.
3. Jones, D. L., and Moore, T.: The Types of Neuropathic Bladder Dysfunction Associated with Prolapsed Lumbar Intervertebral Discs. Brit. J. Urol. 45:39, 1973.
4. Slooff, Johan L., et al.: Primary Intramedullary Tumors of the Spinal Cord and Filum Terminale. W. B. Saunders, Philadelphia, 1964, pp. 19, 181.
5. Kahan, M.; Goldberg, P., and Mandel, E.: Neurogenic Vesical Dysfunction and Diabetes Mellitus. Isr. J. Med. Sci. 8:772, 1972.
6. Campbell, Meredith and Harrison, J. Hartwell: Urology. W. B. Saunders, Philadelphia, 1970, p. 1722.
7. Wolff, Harold G.: Stress and Disease, Charles C. Thomas, Springfield, Ill., 1968, p. 91.

Medical Grand Rounds

From the West Virginia University Medical Center

Edited By

Raymond B. Weiss, M. D.
Associate Professor of Medicine

Mycosis Fungoides

Discussants: Myron F. Knell, M. D.; Raymond B. Weiss, M. D.; and William A. Welton, M. D.

Myron F. Knell, M. D., Resident, Department of Medicine.

Case Presentation

The patient is a 52-year-old man who developed a dermatitis about two years before admission that was characterized by mildly pruritic, eczematous plaques over the right lower abdomen. He had been employed for nine years as a metal grinder, and he felt that the metal filings aggravated the skin lesions. He saw his physician and allergy testing was performed which showed nickel and chromium sensitivities. He was treated with 15 mg. of Prednisone daily. In spite of treatment and attempts to cover his skin while at work, the dermatitis slowly progressed to involve most areas of the body except his head, neck, and distal extremities.

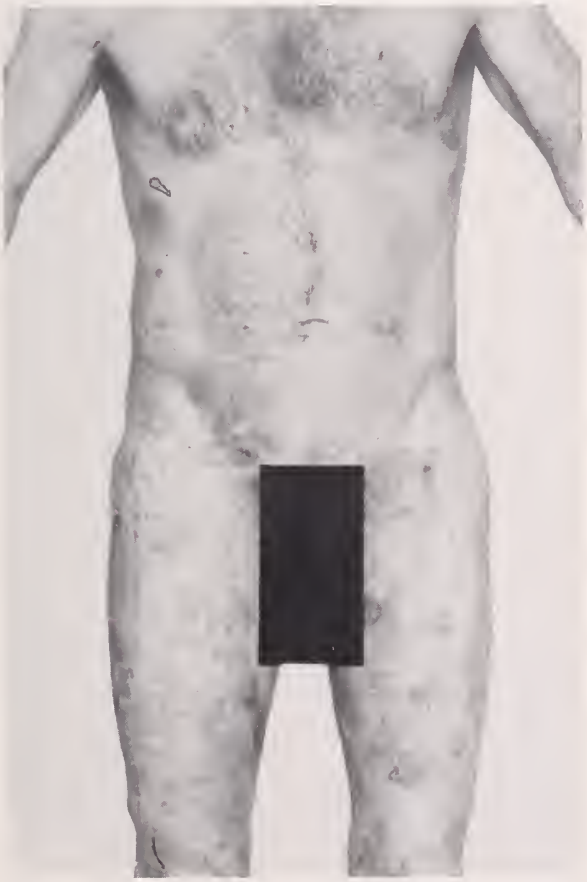


Figure 1. Extensive polycyclic scaling plaques on patient before therapy.

The skin lesions evolved into scaly, infiltrated plaques of both patchy and annular patterns (Figure 1). Several months prior to admission he noted tumor masses in his left groin and right thigh areas; one of these recently ulcerated (Figure 2).

Ten days prior to admission he stopped taking the Prednisone and three days later he developed a high fever with chills. He also noted a generalized, scaly erythematous rash over his face and neck.

On physical examination he appeared to be in good physical condition except for the widespread skin lesions as previously described. Other pertinent findings were small bilateral inguinal nodes and an enlarged right axillary node. There was no hepatosplenomegaly.

Laboratory findings included normal blood counts and differential, but an occasional bizarre lymphocyte was seen in the peripheral blood. PAS stain of the blood showed no positive granules in these mononuclear cells. Bone marrow aspiration revealed only a mild increase in plasma cells, and bone marrow biopsy was normal. Serum protein electrophoresis showed an increase in all globulin fractions. A TB skin test was negative and a histoplasmin skin test was positive.

A skin biopsy showed Pautrier's abscesses in the epidermis and dense dermal infiltrations of

Figure 2. Close-up of a lesion in the tumor stage on the upper thigh surrounded by plaques and some annulare.

atypical histiocytes, lymphocytes, plasma cells, and neutrophils characteristic of mycosis fungoides. Clinically, he appeared to have only the dermal stage of this disease, but the presence of the lymphadenopathy and the fever were suggestive evidence for visceral involvement. He was referred to the Baltimore Cancer Research Center of the National Cancer Institute for inclusion in protocol studies of this disease.

An axillary lymph node biopsy in Baltimore showed changes consistent with the presence of a chronic dermatitis, i.e., so-called dermatopathic lymphadenitis. An exploratory laparotomy and splenectomy were done to rule out visceral involvement. Liver biopsies, node biopsies, and the spleen were negative for mycosis fungoides. A lymphogram and gallium scan were negative.

Adriamycin therapy was begun under an investigational protocol and superficial radiotherapy was given to the several tumorous skin lesion on his legs. All skin lesions have completely disappeared and he now has only residual pigmentary changes at the sites of previous large lesions (Figure 3).

Discussion

Mycosis fungoides (MF) is an uncommon neoplastic disease of the lymphoreticular system first manifested in the skin and is the most common of the lymphomatous diseases involving the skin.[1] It was first described by Alibert, in 1835, who named the disease because of the mushroom-like appearance of the tumors. MF is seen world-wide and in all races. The disease occurs more commonly in males than females with about a 2:1 ratio and is reported to be less common in blacks. It is not a common tumor, and only accounts for about 200 deaths per year in the U. S. There is no occupational association or pattern of familial incidence.[1]

Skin lesions are usually first seen in the fifth decade of life and are non-specific eczematous or psoriasiform eruptions in most patients, making a specific diagnosis sometimes difficult. It is not unusual for patients to relate the onset to a drug eruption or chronic allergic contact dermatitis. The duration of skin lesions before a diagnosis of mycosis fungoides can be made is 4 to 10 years with a wide range of a few months to 50 years.[2] Ten per cent of patients present with tumorous skin lesions without antecedent erup-

Figure 3. After treatment. Some residual pigmentation is apparent.

tions, and another 10 per cent present with diffuse erythroderma. With the non-specific presentation the usual course is progressive thickening with scaly or smooth plaque formation.[3] These lesions sometimes clear centrally and form annular, arcuate patterns. If lesions regress, hyper- or hypopigmentation is seen, and alopecia may occur. With the increased cellular infiltration of plaques, tumors develop, although they may arise from normal skin. These tumors are usually painless and may ulcerate. All stages of development are frequently seen at the same time.[1]

The characteristic histologic feature of skin biopsies is a polymorphic cellular infiltrate of lymphocytes, plasma cells, neutrophils, and histiocytes within the dermis. The histiocytes may be very pleomorphic and other characteristic atypical cells, the mycosis fungoides cells, are seen. Pautrier's microabscesses which are focal collections of abnormal lymphoid cells may be found within the epidermis.

This is primarily a cutaneous disorder which usually pursues an indolent, but progressive, course. As the disease progresses over a period of years, however, systemic dissemination commonly occurs with resultant short survival. Lymphadenopathy, both generalized peripheral and hilar, is a common manifestation of the systemic disease. Other extracutaneous sites of disease are the lungs, pleura, bone marrow, liver, and spleen.[3] Less commonly MF can involve the kidneys, heart, GI tract and central nervous system. CNS involvement is rarely noted except at autopsy, but a recent case report documented the occurrence of CNS symptoms and mycosis fungoides cells in the spinal fluid.[4] More and more lymphomas of all types are manifesting CNS involvement clinically as patients live longer. The over-all frequency of extracutaneous involvement at autopsy is about 72 per cent.[3]

There are few laboratory abnormalities with early disease, but later many patients have moderate eosinophilia and lymphocytopenia. The latter is correlated with a poor prognosis.[5] In contrast to some other lymphomas overt bone marrow involvement is unusual.

Up to 20 per cent of patients have circulating abnormal mononuclear cells which have PAS positive granules in their cytoplasm. Frequently, markedly elevated levels of IgA are found, the significance of which is unclear, but they may represent antibody response to the tumor antigen. Anergy is not seen until the terminal stages.

There is no evidence that therapy employed so far has altered the over-all survival of patients with mycosis fungoides.[2,3] Once the histologic diagnosis is confirmed, the median survival for all patients is less than five years. The duration of disease from the time of diagnostic skin biopsy to the development of clinically-apparent visceral involvement varies from seven months to six years with a mean time of 22 months.[6] Many factors have important prognostic significance. If the patient is over 60 years of age at the time of biopsy diagnosis, the median survival is 30 months, but if under 50 years, it is 72 months.[2] If there are skin tumors, ulcerations, or palpable nodes at the time of diagnosis, the survival is less than 30 months, and the absence of these findings correlates with a median survival of more than 72 months. If tumors, ulcerations or nodes appear during the course of treatment, median survival is approximately 24 months, and if all three develop, the patient will live about one year.[3] Extracutaneous disease forebodes a poor prognosis with an average survival from its onset of 11 months with a range of 3 to 18 months.

The presence of the enlarged node and the skin tumors in our patient were indicative of advancing disease with a poor prognosis, and thus the rationale for using chemotherapy in his case.

Although treatment seems not to affect survival, most forms of therapy have produced symptomatic benefit. As the disease progresses, however, both the frequency of response and its duration progressively shorten. There are three types of therapy: (1) topical application of various agents, (2) orthovoltage or electron beam radiotherapy, and (3) systemic chemotherapy.

Of the topical agents used nitrogen mustard seems most effective, with about half the patients having complete resolution of skin lesions and another 25 per cent achieving some partial benefit.[7] In order to sustain the remission, however, permanent maintenance therapy had to be used and patients did not always tolerate this well. At this point we cannot say that topical nitrogen mustard has any "curative" value—even for patients with only skin involvement.

Whole body electron beam is the most beneficial type of radiotherapy, with early lesions responding most completely. One report has documented the extremely long-duration remissions sometimes obtainable with electron beam radiation.[5] Fourteen patients had no evidence

of disease with follow-up for 3 to 14 years following a single course of therapy. These patients probably had early disease limited to the skin and are "cured" by the radiation.

Chemotherapy with alkylating agents is used most commonly for visceral disease with good short term results, but newer agents such as Bleomycin[8] and Adriamycin appear more promising.

Raymond B. Weiss, M. D., Division of Medical Oncology.

Although it is oddly named, this disease is a malignant lymphoma which begins in the skin and may involve only the skin for many years. Eventually, however, it involves lymph nodes and extra-lymphatic organs and it is then rather rapidly fatal. Systemic dissemination often has been misinterpreted pathologically as progression to a malignant lymphoma of another type such as histiocytic lymphoma or Hodgkin's disease.

Our understanding of this disease has been improved in recent years by good pathological studies of autopsy material in which the same cellular infiltrate is seen in the skin and the extracutaneous sites,[6] and by the method of T & B cell determination. "T" lymphocytes are those cells which are influenced by the thymus and function in cellular immunity such as delayed hypersensitivity. "B" lymphocytes are influenced by the bone marrow and function in humoral immunity, the production of specific immunoglobulins. Some of these B lymphocytes differentiate into plasma cells, and become highly specialized B cells. T & B lymphocytes are indistinguishable by light microscopy, but they can be separated by immunological techniques. This separation has allowed the determination of the origin of lymphomas as to whether they are malignant T or B lymphocytic diseases. Most of the cases of non-Hodgkin's lymphomas such as histiocytic lymphoma, Burkitt's lymphoma, and chronic lymphatic leukemia are B cell malignancies.[9] Mycosis fungoides, however, is a T cell type; the malignant cells in the skin, blood or visceral organs are of "T" origin.[10] Thus, it would be improbable that a malignancy of one type of lymphoma (T cell origin) would spontaneously change into another type (B cell origin). It is the same disease whether seen in the skin or elsewhere.

As was pointed out, systemic involvement is associated with a poor prognosis. It also was pointed out that topical drugs and superficial radiation control the skin stage of the disease. However, they do not prevent the progression of microscopic foci of lymphoma to extracutaneous sites (which may even be present early in the disease course). Once this visceral progression has occurred, responses to systemic chemotherapy are not always rewarding in percentage or duration.

The treatment of other advanced malignancies, particularly Hodgkin's disease, acute leukemia, and some solid tumors, has progressed dramatically in the last few years with the use of more "aggressive" chemotherapy doses and drug combinations. The goal in treatment of these diseases is to achieve a complete remission, that is, no evidence of tumor by any clinical measurement. When one plots the survival of patients who achieve complete remission, it is extremely good compared to the patient who has no response or only partial reduction of tumor. Those patients who have the smallest tumor load frequently are the patients who achieve complete remission.

Possibly a more aggressive approach should be taken initially with this disease. Diagnostic laparotomy might be done to detect early visceral involvement and then chemotherapy begun very early in those patients who have occult visceral tumor. Such laparotomies were done in one series of 13 patients with skin lesions only and significant unsuspected disease was found in the liver, spleen, and abdominal lymph nodes.[11]

There have been a number of chemotherapeutic agents that have shown activity in this disease, but only a small number of patients have been reported who were treated with combination regimens and these were patients with far-advanced disease. Trials are under way with support from the National Cancer Institute to investigate these new avenues of therapy.[12] There is certainly enough successful precedent for the rationale of the early aggressive combination chemotherapy approach in other tumors for it to be tried in this disease also.

William A. Welton, M. D., Chairman, Division of Dermatology.

The problem in applying early vigorous systemic chemotherapy is early diagnosis. The skin lesions are not specific and can easily be mistaken for chronic eczematous dermatitis. Also, the main histologic feature, the Pautrier abscess, has been reported in benign dermatoses.[13] The electron microscopy appearance of the MF cell with its cerebriform nucleus looked encouraging for being a diagnostic finding but this cell has also been found in benign skin lesions.[14] One should consider this diagnosis, however, in any

patient with a chronic dermatitis which is not responding to treatment.

The same problem arises in evaluating systemic involvement. It can be difficult to distinguish between MF node involvement and dermatopathic lymphadenitis. The histologic changes of both conditions have even been seen in the same node.[5] Although the presence of dermatopathic lymphadenitis seems in some cases to be associated with the likelihood of systemic MF involvement,[5] it is also seen in chronic pruritic benign dermatoses and may be seen in lymphomas with pruritic skin lesions. It differs from MF or other lymphomas in a node by the preservation of the capsule, little or no destruction of the node architecture, and the presence of phagocytic activity in reticular cells.

Hopefully, the newly-formed Mycosis Fungoides Cooperative Study Group[12] can develop clinical and pathologic criteria for early diagnosis. A question to answer for this group is—can truly early cases be cured by vigorous treatment of the skin by topical nitrogen mustard or electron beam radiotherapy?

References

1. Van Scott, E. J., and Haynes, H. A.: Cutaneous Lymphomas, in Dermatology in General Medicine. Edited by Fitzpatrick, T. B. et al. New York, McGraw-Hill Book Co., 1971.
2. Epstein, E. H.; Levin, D. L., and Croft, J. D. et al.: Mycosis Fungoides. Survival, Prognostic Features, Response to Therapy, and Autopsy Findings. Medicine. 51:61-72, 1972.
3. Levi, J. A., and Wiernik, P. H.: Management of Mycosis Fungoides—Current Status and Future Prospects. Medicine. 54:73-88, 1975.
4. Hauch, T. W.; Shelbourne, J. D.; Cohen, H. J., et al.: Meningeal Mycosis Fungoides: Clinical and Cellular Characteristics. Ann. Intern. Med. 82:499-505, 1975.
5. Fuks, Z. Y.; Bagshaw, M. A., and Farber, E. M.: Prognostic Signs and the Management of Mycosis Fungoides. Cancer. 32:1385-1395, 1973.
6. Long, J. C., and Mihm, M. C.: Mycosis Fungoides with Extracutaneous Dissemination: A Distinct Clinicopathologic Entity. Cancer. 34:1745-1755, 1974.
7. Van Scott, E. J., and Winters, P. L.: Responses of Mycosis Fungoides to Intensive External Treatment with Nitrogen Mustard. Arch. Dermatol. 102:507-514, 1970.
8. Spigel, S. C., and Coltman, C. A.: Therapy of Mycosis Fungoides with Bleomycin. Cancer. 32:767-770, 1973.
9. Mathé, G., and Belpomme, D.: T and B Lymphocytic Nature of Leukemias and Lymphosarcomas: A New but still Uncertain Parameter for their Classification. Biomed. 20:81-85, 1974.
10. Edelson, R. L.; Kirkpatrick, C. H., and Shevach, E. M., et al.: Preferential Cutaneous Infiltration by Neoplastic Thymus-Derived Lymphocytes. Morphologic and Functional Studies. Ann. Intern. Med. 80:685-692, 1974.
11. Variakojis, D.; Rosas-Uribe, A., and Rappaport, H.: Mycosis Fungoides: Pathologic Findings in Staging Laparotomies. Cancer. 33:1589-1600, 1974.
12. Special editorial. Mycosis Fungoides Cooperative Study. Arch. Dermatol. 111:457-459, 1975.
13. Ackerman, A.; Breza, T. S., and Copland, L.: Spongiotic Stimulants of Mycosis Fungoides. Arch. Dermatol. 109:218-220, 1974.
14. Flaxman, B. A.; Zlazny, G., and Van Scott, E. J.: Nonspecificity of Characteristic Cells in Mycosis Fungoides. Arch. Dermatol. 104:141-147, 1971.

A pleasure is none the less a pleasure because it does not please forever.

W. Somerset Maugham

A message from a guest . . .

The President

AMERICAN ACADEMY OF FAMILY PHYSICIANS

FOR WHOM DO YOU CARE?

I WISH to thank the West Virginia State Medical Association for the opportunity to be guest editor, and to tell you briefly a few things about the Family Physicians and for whom we care.

We in the American Academy of Family Physicians are proud of the progress we have made in the development of our new specialty of Family Practice. We now have 259 residency programs in operation and over 3,700 young men and women in these residency programs. This breaks down as follows: first-year residents, 1616; second-year residents, 1262; and third-year residents, 842.

If somehow I could have an hour to visit with this new cadre of family specialists, I would ask them to remember that the patient must remain central in all of their professional efforts. Clinical achievements are mechanical and incomplete unless they are fleshed out by the warmth and substance of human caring and interaction. I would urge them to assume the role of advocate on behalf of each patient. Then, in addition to offering the patients the best of their medical expertise, I would hope they do not stop short of seeing that all available services of consultants and community services are made available.

I am convinced that many of the problems in medicine stem from the instances in which warmth and caring are allowed to escape from the patient-physician relationship.

Finally, I pose questions for thought for each of us:

How much faith do we have in medicine?

How much faith do we have in our fellow physicians?

How much faith do we have in our patients?

Better yet, how much faith do our patients have in us?

As we enter the bicentennial year of the birth of our nation, how much faith do we have in the present and future of our great country?

CARL B. HALL, M. D.
Charleston, W. Va.

THE WEST VIRGINIA MEDICAL JOURNAL

Official Organ of the West Virginia State Medical Association

The Publication Committee is not responsible for the authenticity of opinion or statements made by authors or in communications submitted to this Journal for publication. The author or communicant shall be held entirely responsible

Editor
GEORGE F. EVANS, M. D.
122 South Sixth St.
Clarksburg, W. Va.

Managing Editor and
Business Manager
MR. CHARLES R. LEWIS
Box 1031
Charleston, W. Va. 25324

Associate Editors:
VERNON E. DUCKWALL, M. D.
Elkins
JOHN M. HARTMAN, M. D.
Charleston
THOMAS J. HOLBROOK, M. D.
Huntington
JOE N. JARRETT, M. D.
Oak Hill
EDWARD J. VAN LIERE, M. D.
Morgantown
STEPHEN D. WARD, M. D.
Wheeling

Published monthly on the first day of the month, at Charleston by the West Virginia State Medical Association. Original articles are accepted on condition that they are contributed exclusive to the Journal. Advertising rates furnished on request.

Address all communications to Business Manager, West Virginia Medical Journal, Box 1031, Charleston, West Virginia 25324. Phone 346-0551.

EDITORIALS

DEATH DEFINED IN WEST VIRGINIA

The moment of death and the criteria for its determination have taken many faces down through the centuries. In recent years, as it has become possible to sustain life artificially, more sophisticated criteria for death (given impetus and necessity by organ transplant surgery) have been formulated, and the conventional absence of vital signs used in the past is no longer valid. The criteria hinge on the determination of irreversible cessation of brain function. As our knowledge has increased the criteria have been changed and, accordingly, different prescribed standards may even be in conflict. Only of late has it been necessary for a physician to consider the fact that he may no longer discontinue facing the charge of homicide if, for example, the omission will result in the failure of pulmonary ventilation and heart action. While at present the artificial measures of sustaining life apply largely to respirators, these measures can easily be seen to be extended into other areas. In West Virginia, by H. B. 1356, Article 19, passed on March 9, 1975 to become effective in 90 days, the Legislature has defined death in the State:

"(b) 'Death' means that a person will be considered dead if in the announced opinion of the attending physician, based on ordinary standards of medical practice, the patient has experienced an irreversible cessation of spontaneous respiratory and circulatory functions; or, in the event that artificial means of support preclude a determination that these functions have ceased, a person will be considered dead if in the announced opinion of a physician, based on ordinary standards of medical practice, the patient has experienced an irreversible cessation of spontaneous brain functions. Death will have occurred at the time when the relevant functions ceased."

This is useful and is the law of the State but, on reflection, what constitutes "ordinary standards of medical practice"? Will not the physician who determines "irreversible cessation of brain functions" be required on his day in court to prove that he used "ordinary standards of medical practice" and, if so, how can he withstand the attacks of an able attorney who will produce extensive and possibly conflicting—if not virtually unattainable—"standard criteria"? No physician can function properly if in constant agony about malpractice potentials. In the determination of death he must, as in all facets of medicine, exercise his best clinical judgment, prudently obtain the opinion of a consultant in some instances, and keep his hands to the plow with the satisfaction that he has given his best.

It is generally accepted that often during the natural process of aging the eyes may show a state of arous corneae senilis. This condition is an opacity of the peripheral cornea due to deposition of cholesterol, phosopholipids and neutral fat in the surface membrane of the cornea. Presumably the fat content of arcus senilis is derived from the blood, which suggests an analogy with atherosclerosis. All workers in this field, however, do not subscribe to this latter statement.

SIGNIFICANCE OF UNILATERAL ARCUS CORNEAE SENILIS

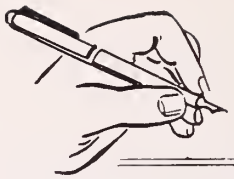
Arcus senilis, incidentally, is not necessarily a sign of advanced age as the term suggests. Rifkind[1] in 1965 reported an incidence of 14 per cent of arcus senilis in people whose age ranged from 30 to 39 years. He laments that the term arcus senilis is so well established and so widely used and offers more descriptive terms, such as "cornea lipoides arcus," or simply "corneal arcus." In the judgment of the author of this essay the latter term is preferable. It will be difficult, however, to eliminate the term arcus senilis from the medical vocabulary.

In 1973, Smith and Susac[2] reported a case of unilateral arcus senilis, which occurred in the right eye. At autopsy a large plaque virtually occluding the lumen of the left internal carotid was found; the right side was patent. Thus the arcus senilis appeared on the side opposite to the carotid occluded. These authors postulated that the presence of arcus senilis with contralateral carotid occlusive disease results from a homolateral reduction in flow acting as a protective phenomenon on the obstructive side.

Bagla and Golden[3] have recently reported a case of unilateral arcus corneae senilis in a 52-year-old woman. Ophthalmodynamometric measurements showed a pressure of 120/88 mm. Hg. on the right and 100/25 mm. Hg. on the left, which they point out is consistent with stenosis of the left carotid artery. They concluded that unilateral arcus senilis is a sign of contralateral carotid occlusive disease.

These observations on unilateral arcus senilis are highly important as an aid in diagnosing a constriction of the carotid artery. It is a simple matter to examine the eyes and to note that only one eye shows an arcus senilis. In order, however, to make a positive diagnosis of stenosis of the carotid artery it probably would be necessary to make ophthalmodynamometric measurements in both eyes.

1. Rifkind, B. M.: Lancet. 1:312, 1965.
2. Smith, J. L., and Susac, J. O.: JAMA. 226:676, 1973.
3. Bagla, S. K., and Golden, R. L.: JAMA. 223:450, 1975.



Our Readers Speak

ASPIRATION PNEUMONIA

In "Questions and Answers," Journal of the American Medical Association, Vol. 232, No. 3, April 21, 1975, there is a monograph, "Aspiration Pneumonia," by D. E. Dines, M. D. He states that unconscious and debilitated patients, as well as those in certain postsurgical situations, are at risk of impaired cough and gag reflexes.

I would like to add another frequent prodrome to aspiration pneumonia that should be a concern in the psychiatric wards. That is with patients who are taking butyrophenones (and other neuroleptics) for psychoses. They are not otherwise debilitated and may not appear to be highly sedated, but may nonetheless have a seriously depressed cough reflex. This has occurred several times in my experience, with aspiration pneumonia ensuing . . . The following example may be a prototype:

A 37-year-old chronic schizophrenic male was changed from a heavy schedule of clorpromazine to haloperidol 15 mg. B.I.D. He was also a resistant hypertensive who had been taking reserpine, methyldopa, and propranolol HCl for several months. (None of these hypertension medications are reported in the PDR to depress the cough reflexes).

Following about 24 hours of the new regimen he went into a paroxysm of gagging after being given three tablets of medication. When the Heimlich maneuver was used he was seen to expel three tablets. These were identified as the ones administered to him. He continued, however, to present an alarming picture: marked anxiety and tremendous restlessness, diaphoresis, drooling, tachycardia, hypotension, cold clammy skin, ataxia and, on auscultation of the chest, generalized wheezing and rhonci (more prevalent on the right lateral side).

Aspiration of his "chaser" was diagnosed tentatively, along with consideration of a possible drug interaction just coincidentally precipitating at that moment. He was transferred to the medical ward with orders to get a chest film en route and to stop all present medications.

His condition stabilized rapidly and he was returned the following day . . . At no time was he given any medications or treatment such as antibiotics, aminophylline, corticosteroids and IV fluids, or positive-pressure breathing.

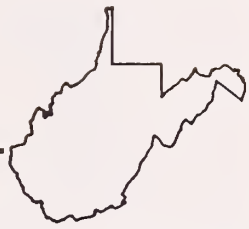
He showed no signs of physical illness and became hyperactive in his ward behavior. Eight days later his x-ray report filtered back to my ward. I was astonished to read the description of "increased peribronchial markings in the rgt. base"... "diffuse opacification of the rgt. mid-lung field"... suggesting . . . "atalectasis" . . . with . . . "elevation of the rgt. diaphragmatic dome" . . . "decreased aeration" . . . and "slight" pneumonitis of the right mid- and lower-lung fields.

A chest film done approximately two weeks after the incident showed "complete clearing" of the lung. EKG, CBC and SMA-12 were reported "normal," and the patient remains asymptomatic.

Had this patient been kept on the psychiatric ward for further observation the correct diagnosis would never have been made. The remission of symptoms was so rapid that final recognition was totally x-ray dependent. Cessation of neuroleptics probably restored adequate coughing that cleared the obstruction and secondary pathology.

G. M. Solan, M. D.
Hawthornden State Hospital
Northfield, Ohio 44067

GENERAL NEWS



Plans Completed For Mid-Winter Clinical Conference Program

Plans are complete for the Ninth Mid-Winter Clinical Conference to be held Friday afternoon through Sunday morning, January 30-February 1, in Charleston at the Daniel Boone Hotel.

The annual continuing education event is sponsored by the State Medical Association in conjunction with other medical groups and voluntary health

Jack Leckie, M. D.

William O. McMillan, Jr., M.D.

agencies. The conference offers a program of diverse clinical presentations dedicated to West Virginia's practicing physicians. Participating in this year's program will be 11 principal speakers.

Friday Afternoon

The 1976 conference will open at 2 P. M. on Friday, January 30, with opening remarks delivered by Dr. Jack Leckie of Huntington, President of the State Medical Association. Presiding at the opening session, a symposium on "The Acute Abdomen," will be Dr. William O. McMillan, Jr., of Charleston, gastroenterologist and Clinical Associate Professor of Medicine, Charleston Division, West Virginia University Medical Center.

The speakers and their topics will be "Blunt Trauma to the Abdomen," Alvin L. Watne, M. D., Professor and Chairman, Department of Surgery, WVU School of Medicine, Morgantown; "The Surgical Approach to the Acute Abdomen," Donald E. McDowell, M. D., Chief of Surgery, Veterans Administration Hospital, Clarksburg, and Clinical Associate Professor of Surgery, WVU; and "Pancreatitis and Other Non-Surgical Causes Simulating the Acute Abdomen," Charles E. Turner, M. D., Huntington, gastroenterologist and Chief of Medicine, St. Mary's Hospital, Huntington.

Friday Evening

Concurrent sessions will be held at 8 P. M. Friday. Dr. James H. Sammons, Executive Vice President of the American Medical Association, will be the speaker at the physicians' session, at which Doctor Leckie will preside. Doctor Sammons' topic will be "Where the AMA Stands Today." The physicians' session will be held in the mezzanine parlors.

The other session, entitled "Dyslexia and the Hyperactive Child," is scheduled for the public and will be held in the ballroom. The speaker will be Dr. Herman K. Goldberg of Baltimore, an ophthalmologist. Doctor Goldberg is Chief of Ophthalmology at Sinai Hospital in Baltimore and Associate Professor of Ophthalmology and Pediatrics at Johns Hopkins Hospital there.

Prior to Doctor Goldberg's presentation, opening remarks will be made by Mrs. Frances Fuller, Supervisor of Consultants in Learning Disabilities for Kanawha County Schools; and Mrs. Hope Stewart, R. N., Coordinator of Health Services for the school system. Mrs. Fuller will mention the dyslexia learning disability problems she encounters, and Mrs. Stewart will make observations about the role of school nurses in working with this disability.

Presiding at the public session will be Dr. Herbert H. Pomerance, Director of Pediatrics at Charleston Area Medical Center and Professor of Pediatrics, Charleston Division, WVU. The presiding physician announced previously for this session, Dr. Edwin M. Shepherd, Charleston ophthalmologist, will be unable to participate because of illness.

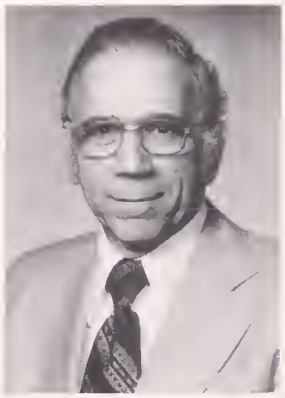
Saturday Morning

Physicians will have the opportunity to hear Doctor Goldberg's presentation on "Dyslexia and the Hyperactive Child" at the Saturday morning session, January 31, beginning at 9:30. Mrs. Fuller and Mrs. Stewart again will participate. Dr. Hartwell G. Thompson, Dean of the Charleston Division, WVU, will preside.

Saturday Afternoon

Dr. Robert C. Parlett of Huntington will preside at the Saturday afternoon session beginning at 2 o'clock. Doctor Parlett is Vice President and Dean of the Marshall University School of Medicine and Associated Health Professions.

The speakers and their topics will be "Prevention and Treatment of Undue Hyperglycemia and



Herbert H. Pomerance, M. D.

Hartwell G. Thompson, M. D.

Ketosis," Thaddeus S. Danowski, M. D., Director of Medicine and Director, Institute of Graduate Medicine, Shadyside Hospital, Pittsburgh; and Clinical Professor of Medicine, University of Pittsburgh; "Office Dermatology," Peyton E. Weary, M. D., University of Virginia Medical Center, Charlottesville; and "Office Otolaryngology," Philip M. Sprinkle, M. D., Professor and Chairman, Division of Otolaryngology, WVU.

Sunday Morning

Presiding at the 9:30 Sunday morning session, February 1, will be Dr. John E. Jones, Dean of the WVU School of Medicine, Morgantown.

The speakers and their topics will be "Office Gynecology," Charles A. White, M. D., Professor and Chairman, Department of Obstetrics and Gynecology, WVU; "Office Urology," D. Franklin Milam, M. D., Professor of Surgery and Chairman, Division of Urology, WVU; and "Continuing Medical Education—Who Needs It!," N. LeRoy Lapp, M. D., Associate Professor of Medicine and Assistant Dean for Continuing Education, WVU.

Associated Meetings

A number of medical groups will be meeting in conjunction with the Ninth Mid-Winter Clinical Conference. As this issue of *The Journal* went to press, all of the meetings were scheduled for Saturday, January 31. Scheduled for luncheon meetings on that date are:

Board of Directors, West Virginia Chapter, American Academy of Family Physicians; West Virginia State Society of Allergy; Annual Meeting, West Virginia Thoracic Society; Section on Urology, West Virginia State Medical Association; Board of Directors, American Diabetes Association, West Virginia Affiliate; and an organizational meeting of West Virginia dermatologists. The Cancer Committee of the State Medical Association will hold an 8 A. M. breakfast meeting on Saturday.

Pre-Conference Seminar

A pre-conference meeting co-sponsored by the State Medical Association and the West Virginia Workmen's Compensation Fund, a "Seminar on the Procedures and Problems of Evaluating Impairment," will be held on Thursday, January 29 at the Daniel Boone. The principal speaker will be Dr. Raymond M. McKeown of North Bend, Oregon, a recognized authority and writer on the socio-economics of medicine and the author of the book, "Guides to Evaluation of Permanent Impairment."

Doctor McKeown's presentation on standards for determining impairment will be folowed by a question-and-answer period. The seminar then will be concluded with a discussion on "Why Isn't It That Easy: Practical Problems in Evaluating Impairment." Panelists will be Doctor McKeown, Dr. Kwan Ho Lee of Beckley, Dr. Joseph P. Seltzer, Charleston; and Stanley E. Preiser and John L. McClaugherty, Charleston attorneys. Michael R. Crane, staff attorney for the Compensation Fund, will be the moderator.

Other Conference Information

Registration will be held in the ballroom lobby on Friday beginning at 1 P. M. and on Saturday and Sunday beginning at 8 A. M. Physicicans and others also may register for the conference beginning at 7 P. M. Friday on the mezzanine prior to the physicians' session. Those attending the public session only may register Friday in the ballroom lobby beginning at 7 P. M. A fee of $15 for the entire conference will be charged all registrants except nurses, medical students, interns and residents.

Serving on the Program Committee are Drs. Joseph T. Skaggs and Ralph H. Nestmann of Charleston, Co-Chairmen, and Drs. William O. McMillan, Jr., of Charleston, and C. Carl Tully of South Charleston.

The conference is approved for 12 credit hours in Category 1 of the American Medical Association Physician's Recognition Award—and for 12 hours of Prescribed Credit by the American Academy of Family Physicians.

Dr. Frank J. Holroyd (left), a West Virginia State Medical Association Delegate from Princeton, and Dr. Harry S. Weeks, Jr., of Wheeling, an Alternate Delegate, prepare for the opening session of the House of Delegates at the American Medical Association's Clinical Convention in Honolulu on Sunday, November 30. Doctor Weeks served for Dr. Richard E. Flood of Weirton, the Association's other Delegate who was busy with additional AMA duties when the House session began.

Robert C. Parlett, M. D.

John E. Jones, M. D.

The other sponsors for 1976 are:

West Virginia Chapter, American Academy of Family Physicians; American Diabetes Association, West Virginia Affiliate; American Heart Association, West Virginia Affiliate; West Virginia Lung Association and its Kanawha County Council; West Virginia University School of Medicine and its Alumni Association; West Virginia Chapter, American Society of Internal Medicine; Section on Urology, West Virginia State Medical Association; West Virginia Medical Institute, Inc.; West Virginia Division, American Cancer Society; Kanawha Medical Society and its Woman's Auxiliary; West Virginia Chapter, American Academy of Pediatrics; and Section on Orthopedic Surgery, West Virginia State Medical Association.

As this issue of *The Journal* went to press, groups scheduled to have exhibits during the conference were the West Virginia Thoracic Society/West Virginia Lung Association; the American Heart Association, West Virginia Affiliate; American Diabetes Association, West Virginia Affiliate; WVU School of Medicine Alumni Association; and the Chesapeake and Potomac Telephone Company of West Virginia.

Kanawha Medical Society Offers Social Event

Physicians, wives and others attending the Mid-Winter Clinical Conference are invited to the annual dinner dance of the Kanawha Medical Society which will be held Saturday, January 31, in the Daniel Boone Hotel ballroom beginning at 7 P. M. The affair will include cocktails, dinner and dancing. Dress will be formal.

The cost will be $15 per person. Advance registration is requested. Registrations and advance payment, if desired, should be sent to the Kanawha Medical Society, 405 Atlas Building, Charleston 25301. Payment also may be made at the door. Checks should be made payable to the Kanawha Medical Society.

All registrations should be in by January 27.

Continuing Education Activities

Here are the continuing medical education activities listed primarily by the West Virginia University School of Medicine for part of 1976, as compiled by Dr. N. LeRoy Lapp, Assistant Dean for Continuing Education. The schedule is presented as a convenience for physicians in planning their continuing education program. (Other national, state and district medical meetings are listed in the *Medical Meetings* Department of *The Journal.*)

The program is tentative and subject to change. It also should be noted that weekly conferences are held on both the Morgantown and Charleston campuses. Further information about these may be obtained from: Division of Continuing Education, WVU Medical Center, P. O. Box 2867, Charleston 25330; or, Office of Continuing Medical Education, WVU Medical Center, Morgantown 26506.

(1976)

Mar. 6	Internal Medicine Teaching Day	Morgantown
Mar. 26	Third Annual Newborn Day	Charleston
Apr. 1, 2, 3	Cancer Teaching Day	Morgantown
Apr. 23, 24	Lipids Related to Atherosclerosis—Department of Pathology	Morgantown
Apr. 28, 29, 30-May 1	Department of Surgery and West Virginia Chapter of American College of Surgeons	White Sulphur Springs
Apr. 30-May 1	Seminar on Blood Banking	Morgantown

Virginia Pediatrics Chapter To Meet February 27-28

The Virginia Chapter of the American Academy of Pediatrics will hold its annual meeting in Williamsburg February 27-28. Speakers on the scientific program will include Drs. George M. Corney, Vincent A. Fulginiti, Francis S. Massie, Cecil B. Jacobson and Thomas Rubio.

For additional information contact Dr. James H. Stallings, Jr., 107 N. Virginia Avenue, Falls Church, Virginia 22046.

AMA House Adopts Resolution Offered By West Virginia

A resolution which had its roots in the Kanawha Medical Society, and which calls for re-endorsement of a system of free market medicine based on freedom of choice for both patient and the physician, fee-for-service and confidentiality, was adopted by the American Medical Association's House of Delegates in Honolulu last month.

The House action in effect overrode the recommendation of the reference committee to which the resolution, as presented by the West Virginia delegation, was referred for initial consideration.

The committee's report to the House said that while that group "is in accord with the purposes and sentiments expressed by this resolution, there would be no necessity for reiterating what has been long-standing policy." The committee accordingly recommended that the resolution not be adopted.

The resolution, in its original form, was introduced into the West Virginia State Medical Association's House of Delegates by the Kanawha Society during the Association's annual meeting at The Greenbrier in White Sulphur Springs in August.

As adopted there, it called upon the State Medical Association to endorse a system of free-market medicine, and directed that the Association forward a copy of the resolution to the AMA for "proper review and consideration during the AMA's annual Clinical Convention in Hawaii in December."

The resolution accordingly was modified slightly and put into proper form for introduction in Honolulu. As adopted by the AMA's House, the resolution read as follows:

"Whereas, Physicians are citizens of the United States of America and as such should be interested in maintaining our national sovereignty; and

"Whereas, National sovereignty is directly affected by the type of medical care system endorsed by a country; and

"Whereas, Most of the nations of Western Europe and England and many of the less developed nations of the world which have implemented government programs for the provision of medical care to their citizens have met with economic problems bordering on national bankruptcy, placing their national sovereignty in great jeopardy; and

"Whereas, We have had and are experiencing serious fiscal dilemmas with our own Medicare, Medicaid, Social Security and other government directed medical care plans, and also with non-government plans, including the Kaiser type and the United Mine Workers of America hospital chain (which folded in just nine years despite the infusion of millions of public dollars); and

"Whereas, The problems relating to medical care and distribution can best be corrected in a nation which is sovereign and solvent; therefore be it

"Resolved, That the American Medical Association re-endorse a system of free market medicine based on the principle of freedom of choice for the patient and physician alike, fee for service, and strict confidentiality."

Dr. Tom E. Nesbitt (standing) of Nashville, Tennessee, Speaker of the American Medical Association's House of Delegates, prepares to call the first session of the House to order at the AMA's Clinical Convention in Honolulu on Sunday, November 30. On Doctor Nesbitt's right is Dr. Max H. Parrott of Portland, Oregon, the AMA President.

WVU 'Internal Medicine Day' March 6 In Morgantown

The Department of Medicine at the West Virginia University Medical Center, including the Charleston Area Medical Center, will conduct "Internal Medicine Day" on March 6 from 8:30 A. M. to 5 P. M. in Room 4080 at the Medical Center in Morgantown. Plans for the conference include panel discussions and individual lectures by each subspecialty on common medical problems. Between 4 and 5 o'clock there will be a "consultation hour" in which practicing physicians are invited to bring interesting or "problem" cases (including x-rays and/or other data) for discussion with an appropriate subspecialist.

Pre-registration of intentions to attend the conference and to bring a case are requested. Please contact either Dr. Irma Ullrich or Dr. Raymond Weiss in the Department of Medicine, West Virginia University Medical Center, Morgantown 26505. Postgraduate education credits have been applied for from the American Academy of Family Practice and the American Medical Association.

Panel discussions will be held on the topics of "Problems of Common Viral Infections," "Current Controversies in Management of Myocardial Infarctions," and "Management of Chronic Infections of the Lung."

Lectures will include "Pancytopenia," "Management of Hypertension," "The Pros and Cons of Exercise in Preventing Cardiovascular Disease," "Progress in Lung Cancer," "Serological Testing in Rheumatic Disease," "Peptic Ulcer," and "The Clinical Significance of the Serum Sodium Concentration."

Physicians Urged To Provide Early Reports Of Claims

On November 1, 1975, there were 35 medical malpractice cases pending under the West Virginia State Medical Association-Aetna Professional Liability Insurance Program. The average delay in notice with The Aetna Life and Casualty was 10.2 months. Notice was not received on 16, or 45 per cent of the cases, until suit was filed. Delays of this nature cause insurance carriers considerable concern.

Late reporting impedes claim handling because memories fade, witnesses are hard to obtain and records are lost. The problem of delays is further aggravated by the statute of limitations in West Virginia. This law permits an adult two years to bring a law suit. Where minors are involved, suits may be brought in excess of 20 years after the fact.

These factors often force the carrier into a settlement posture on cases that might otherwise be defensible were it not for the lack of proof. Even where a meritorious claim is involved, it benefits both patient and physician when a prompt and amicable settlement is effected.

The medical malpractice policy contains conditions requiring that the physician report a claim as soon as practicable. Failure to do so can have the result of voiding the protection afforded under the policy. Physicians are often unaware of potential claims, but where the possibility exists a report should be made immediately. If the physician is unsure about the possibility of a claim, he should report it to the carrier directly to protect his own interest.

The carrier decides what action is to be taken. The notice may simply be recorded. On occasion, medical records and statements are obtained to preserve the evidence. When a case warrants, the patient is contacted and the claim is resolved. Regardless of the action taken, it is the cooperation of the physician from the outset that directly bears on the carrier's degree of success in protecting his interests.

Officers of the West Virginia State Medical Association review their assignments to cover reference committee hearings during the American Medical Association's Clinical Convention in Honolulu early in December. From left are Drs. Joseph A. Smith of Dunbar, the Association's Vice President; Jack Leckie, Huntington, President; and George R. Callender, Jr., Charleston, one of the Association's two Alternate Delegates to the AMA House of Delegates.

Broaddus Hospital - Myers Clinic CME Program Surveyed

The Broaddus Hospital - Myers Clinic in Philippi was surveyed for accreditation of its continuing medical education program on December 3. The accreditation survey was conducted by the State Medical Association through its Committee on Medical Education and Hospitals. Serving on the survey team were Drs. Hartwell G. Thompson, Dean of the Charleston Division, West Virginia University Medical Center, Chairman; and L. Dale Simmons of Clarksburg, Director of the Family Practice Residency Training Program at United Hospital Center, Inc., there.

The results of the survey will be announced following the next meeting of the Committee on Medical Education and Hospitals. Accreditation means that a continuing education program of a hospital or organization qualifies for credit in Category 1 of the American Medical Association's Physician's Recognition Award.

Also pending final action of the Association's committee is the accreditation survey of the West Virginia Obstetrical and Gynecological Society which was conducted in Huntington on September 26.

The CME program of the Wheeling Area Medical Education Committee, a combined program of the Ohio Valley Medical Center and Wheeling Hospital, will be surveyed February 11-12.

Specialty societies and hospitals which have been accredited by the State Medical Association to date are Beckley Appalachian Regional Hospital; Veterans Administration Center, Martinsburg; West Virginia Academy of Ophthalmology and Otolaryngology; West Virginia Chapter, American College of Surgeons; St. Mary's Hospital, Huntington; and Charleston Area Medical Center.

Nutrition Labeling Of Food Significant Development

Editor's Note: Following are excerpts from a recent issue of the *State of the State's Health*, by N. H. Dyer, M. D., M. P. H., West Virginia State Health Director.

Nutrition labeling of food has been described as the most significant development in labeling practices since food labeling began. Nutrition labeling is regulated by the Food and Drug Administration of the Department of Health, Education, and Welfare. Since January 1, 1975, all prepared and packaged foods shipped in interstate commerce must be

(Continued on Next Page)

(Continued from Page 23)

in compliance with regulations governing nutrition labeling.

Several interrelated factors have led to this important regulation. These include the growth of consumerism, widespread concern for the nutritional status of the U. S. population, the difficulties consumers experience in identifying the nutritional quality of an ever increasing number of processed and formulated foods, and increasing skepticism of the nutritional quality of our food supply. The 1969 White House Conference on Food, Nutrition and Health particularly stressed the need for nutrition labeling as a means of communicating nutrition education and accurate information regarding the nutritive value of the foods we consume.

The four primary objectives of nutrition labeling are to: (1) Provide consumers with extensive nutritional information about packaged foods, (2) Assist in the education of consumers in the complex area of nutrition, (3) Encourage improvement of the nutritional content of our food supply, and (4) Safeguard the nutritional content of the food supply.

Full nutrition labeling must be used if a food is fortified by the addition of any nutrient, or if a specific nutrition claim is made in the labeling of advertising for the food. The following information must be included on the nutrition label:

—Serving size

—Servings per container

—Calorie content per serving

—Protein content per serving, in grams

—Carbohydrate content per serving, in grams

—Fat content per serving, in grams

Percentages per serving of the U. S. Recommended Daily Allowance (U. S. RDA) of Protein, Vitamin A, Vitamin C, Thiamine, Riboflavin, Niacin, Calcium, and Iron also must be designated.

Other nutrients may also be listed, at the option of the food manufacturer. These include: Vitamin D, Vitamin E, Vitamin B_6, Vitamin B_{12}, folic acid, phosphorus, iodine, magnesium, zinc, copper, pantothenic acid and biotin.

Two very important provisions of the nutrition labeling regulations are:

(1) No claim may be made that a food is a significant source of a particular nutrient unless that nutrient is present in the food at a level equal to or in excess of 10 per cent of the U. S. RDA in an average serving. Furthermore, no claim can be made that a food is nutritionally superior to another food unless it contains at least 10 per cent more of the U. S. RDA of the claimed nutrient per serving.

(2) If vitamins and/or minerals are added to a food to the extent that a single serving contains 150 per cent or more of the U. S. RDA for any of the added vitamins or minerals, the food is classified as a drug and is, therefore, subject to drug regulations.

Medical Meetings

The following is a partial list of national, state and district medical meetings scheduled in the coming months.

1976

Jan. 22-25, AMA Leadership Conference, Chicago.

Jan. 28-Feb. 1—Am. College of Psychiatrists, Coronado, Calif.

Jan. 30-Feb. 1—AMA Congress on Medical Education, Chicago.

Jan. 30-Feb. 1—Ninth Mid-Winter Clinical Conference, Charleston.

Jan. 31-Feb. 4—Am. Academy of Orthopaedic Surgeons, New Orleans.

Feb. 8-12—Southeastern Surgical Congress, New Orleans.

Feb. 23-26—Am. College of Cardiology, New Orleans.

Feb. 27-29—AMA Regional Meeting, Denver.

March 5-10—Am. Acad. of Allergy, San Juan, P. R.

March 17-20—AMA Regional Meeting, Lexington, Ky.

March 29-April 2—Am. College of Radiology, Washington, D. C.

April 1-2—W. Va. Chap., Am. Acad. of Pediatrics, Beckley.

April 5-8—Am. College of Physicians, Philadelphia.

April 9-11—W. Va. Chapter, AAFP, Charleston.

April 10-12—AMA-AMPAC Workshop, Washington, D. C.

April 25-28—W. Va. Academy of Ophth. & Otol., White Sulphur Springs.

April 26-29—Am. College of Surgeons, Boston.

April 28-30—Medical & Chirurgical Faculty of the State of Md.

April 28-May 1—W. Va. Chapter, ACS, White Sulphur Springs.

April 29-May 2—ASIM, Atlanta.

May 1-2—W. Va. Assn. of Pathologists, Morgantown.

May 9-12—Am. Assn. of Plastic Surgeons, Atlanta.

May 10-13—Am. College of Obstetricians & Gynecologists, Dallas.

May 27-29—Am. Cancer Society, National Conf. on Radiation Oncology, San Francisco.

June 19—W. Va. State Society of Anesthesiologists, Morgantown.

June 26-July 1—AMA Annual Meeting, Dallas.

Aug. 18-21—109th Annual Meeting, W. Va. State Medical Assn., White Sulphur Springs.

The West Virginia Medical Journal

Vol. 72, No. 2 February, 1976

Insulin Hypersensitivity With Insulin Resistance

R. Gregory McMorrow, M. D.; and Lewis H. McConnell, M. D.

Soon after the introduction of insulin therapy for diabetes mellitus, allergic reactions were described. While most reactions are limited and local and disappear with continued treatment, generalized immediate hypersensitivity reactions to various types of insulin have been previously reported.[1,2] Desensitization to insulin was first reported by Corcoran in 1928,[3] and there have been several reports of similar success.[4,5] The purpose of this paper is to report a case of insulin allergy treated by rapid desensitization and the subsequent development and treatment of insulin resistance.

Case Report

The patient is a 51-year-old white housewife who was discovered to have diabetes mellitus in 1965. Initial treatment with insulin produced intense local wheal and flare reactions at the injection sites. After three or four injections, the development of generalized urticaria and dyspnea was noted, at which time the insulin was discontinued. Since that time she had been treated with diet and chlorpropamide 250 mg. three times a day.

She was admitted to the General Division of the Charleston Area Medical Center on December 8, 1974, complaining of abdominal pain, polydipsia, and polyuria.

On physical examination she was found to be obese (86 kg.) and somewhat lethargic. The blood pressure was 120/70, pulse, 100 per minute, and respirations, 30 per minute. Positive physical findings were limited to bilateral exudates and microaneurysms on fundoscopic examination, and decreased sensation to pin prick and vibration in the distal portions of the lower extremities.

Laboratory data included: Hemoglobin 16.3 grams per 100 ml., white count 10,300 per mm. with a normal differential count, blood glucose 531 mgs. per cent, potassium 4.2 meq./L, bicarbonate 7 meq. L, 4+ glucosuria, 1+ ketonuria, plasma acetone positive in a dilution of 1:4, pH 7.38, pCO_2 12 mm. Hg., and pO_2 97 mm. Hg. Serum IgG was 960 mg. per cent (normal 770-1510 mg. per cent), IgA 364 mg. per cent (normal 134-297 mg. per cent), and IgM 148 mg. per cent (normal 67-208 mg. per cent).

The Authors

- **R. Gregory McMorrow, M. D., Resident; and Lewis H. McConnell, M. D., Department of Internal Medicine and Allergy, Charleston Area Medical Center, Charleston, West Virginia.**

In view of the patient's inability to control her diabetes with diet and oral hypoglycemic agents and particularly in view of her current state of lethargy, hyperglycemia, ketosis, and compensated metabolic acidosis, another trial of insulin therapy seemed indicated. Initial efforts were directed toward substantiating the diagnosis of true hypersensitivity, which was accomplished with intradermal testing to various insulin preparations. Once the diagnosis was proven, desensitization was begun with crystalline beef-pork insulin, one unit subcutaneously. This preparation was chosen because of the approximately equal reactions to all insulins tested, and because of its ready availability in the pharmacy at the time. The dosage was doubled every 15 minutes while observing closely for hypersensitivity reactions, until a dose of 20 units was attained. This dose was maintained four times a day until treatment with isophane beef and pork insulin could be accomplished. This was effected by beginning with one unit and doubling the dose at daily intervals until the desired dose was obtained. Throughout both procedures, local erythema and induration were noted at the injection sites, but there was no generalized urticaria, dyspnea, wheezing, or other evidence of hypersensitivity reaction. With this regimen her dia-

betes rapidly came under control with disappearance of the glucosuria and ketonuria. She was discharged taking 35 units of isophane beef and pork insulin in the morning and five units in the late afternoon. Her afternoon blood glucose ranged between 135 and 165 mg. per cent.

Outpatient follow-up soon revealed the return of hyperglycemia and glucosuria. Despite increases in daily insulin dosage, her blood glucose determinations were consistently greater than 400 mg. per cent. With the development of ketonuria she was re-admitted to the hospital on March 31, 1975. At that time she was taking a total daily dose of 75 units of isophane beef and pork insulin. There had been no significant changes in her physical examination since her previous hospitalization except for an increase in body weight to 88 kg. Blood glucose was 455 mg. per cent at the time of admission with small amounts of acetone in the urine.

Despite increases in total daily insulin dose to 200 units, her blood glucose was never reduced to levels of adequate control and it was assumed that she was truly resistant to this type of insulin. Because pork insulin is in general less allergenic than beef, she was then converted to isophane pork insulin. With a total daily dose of 120 units, both fasting and late afternoon blood glucoses were consistently less than 200 mg. per cent and her glucosuria and ketonuria disappeared. During her period of outpatient follow-up and throughout her hospital course, there was no evidence of local or systemic hypersensitivity reactions.

Materials and Methods

Insulins utilized in testing were commercially available preparations of crystalline pork, crystalline beef, crystalline beef and pork combination, isophane beef, isophane beef and pork combination, insulin zinc suspension pork, and insulin zinc suspension beef and pork combination. Reactions were graded on the basis of the amount of erythema and induration produced. Intradermal control solutions were buffered saline solution.

Common inhalant allergens used for intradermal testing included house dust, grass, alternaria, feathers, endo dust, dog, ragweed, trees, cat, hormodendrum, Dermatophagoides farinae, aspergillus, penicillium, and mixed household insects.

Intradermal testing was performed by the injection of 0.1 ml. of each of the insulin preparations intradermally into the lateral aspect of the upper arm. Similar tests were done on a healthy, non-allergic control. The patient also underwent intradermal testing using beef and pork protein alone. Each of these injection sites was also examined at 15, 30, and 60 minutes for the development of erythema and induration.

Results

Intradermal testing with the insulin preparations produced areas of induration of 8 to 10 mm., and areas of erythema exceeding 20 mm., with each type of insulin utilized, to a minimum of four units. There was no reaction to any of the preparations utilized in the non-allergic control. There were no reactions when the patient was tested with the common inhalant allergens or with beef and pork protein alone.

Discussion

Local allergic reactions to insulin consisting of erythema, induration, and pruritis at the injection site are not uncommon and have been reported to occur in 5 to 30 per cent of patients treated with insulin.[6] Generalized reactions, however, are rare, occurring in one per cent to two per cent,[7] and may appear as generalized rashes,[8] gastrointestinal disorders,[9] angioedema,[10] and anaphylaxis.[7] These reactions are generally believed to be IgE mediated[11,12] and usually occur during the initial month of insulin therapy or after a lapse in injections. Cases have been reported, however, of the development of allergic reactions after uninterrupted treatment for as long as seven years.[13]

True insulin hypersensitivity in this patient was demonstrated on the basis of the history of generalized urticaria and dyspnea immediately after an insulin injection, positive intradermal skin testing with various insulin preparations, negative intradermal testing with the same insulins in a non-allergic control, and negative intradermal testing to noninsulin beef and pork protein. The fact that the patient reacted to all types of insulins used and not to beef and pork would seem to indicate that the hypersensitivity exists to the insulin molecule itself, and not to a protein contaminant. Many individuals who develop local reactions while taking insulin and who do not have systemic reactions will show a wheal and flare response to intradermally administered insulin and to beef or pork, revealing that skin reactions can be related to contaminating proteins as well as the insulin molecule.

The development of insulin resistance after initial desensitization has also been described in a patient by Dolovich and associates,[12] in whom a rise in bovine insulin-specific IgG antibody was demonstrated during desensitization and afterward when insulin resistance developed. Specific IgE antibody was also demonstrated

during this period suggesting that the IgG antibody served as a protective or "blocking" antibody against the IgE-mediated hypersensitivity reaction. Lieberman, et al,[10] in contrast, did not demonstrate IgG insulin binding during or after desensitization and they suggest that antibody neutralization, not the presence of a blocking antibody, is responsible for desensitization. In neither of their patients, however, was insulin resistance reported. While antibodies to insulin are found to some degree in all insulin treated patients, high levels are found only in those with insulin resistance, and this may account for the different findings. IgE has previously been shown to mediate insulin resistance[14] as well as anaphylactic reactions to insulin. Although the mechanisms are not clear, perhaps there is a critical quantity of antigen or subsequently produced antibody which is involved.

Although some of these patients have been managed with dietary restriction and oral hypoglycemic therapy, situations will invariably arise which are not amenable to this form of therapy. Hyperglycemia with associated ketoacidosis is foremost among those situations as was demonstrated by our patient. In this instance rapid desensitization with crystalline insulin can be performed to treat the acute situation until desensitization with longer acting forms of insulin can be effected. In general, the insulin chosen should be the one to which the patient has the least sensitivity on skin testing.

A similar method was utilized by Lieberman and associates in the treatment of two patients, in whom desensitization produced a fall in reaginic antibody titer and the postulated induction of tolerance to insulin. The method of desensitization does carry a small risk in the individual patient who is potentially anaphylactically sensitive to insulin, but is necessary in a small number of patients. Some patients develop systemic reactions after lapses in insulin therapy and, since intermittency is known to augment the immune response to a variety of drugs in the biological class, they must be warned about the danger of omitting daily doses.

References

1. Yasuna, E.: Generalized Allergic Reactions to Insulin. J. Allergy. 14:295, 1941.
2. Engbring, W. H.; Arkins, J. A., and Lennon, G. J.: Insulin Allergy and Insulin Resistance. J. Allergy. 33:62, 1962.
3. Corcoran, A. C.: Note on Rapid Desensitization in a Case of Hypersensitiveness to Insulin. Am. J. Med. Sc. 196:359, 1928.
4. Weitz, M. A.: Insulin Hypersensitivity with Desensitization. J. Allergy. 14:220, 1943.
5. Poliakoff, H.: Rapid Treatment of Severe Diabetic Ketosis Associated with Severe Insulin Allergy. N. Y. State J. Med. 58:243, 1958.
6. Paley, R. G., and Tunbridge, R. E.: Dermal Reactions to Insulin Therapy. Diabetes. 1:22, 1952.
7. Hanauer, L., and Batson, J. M.: Anaphylactic Shock Following Insulin Injection: Case Report and Review of Literature. Diabetes. 10:105, 1961.
8. Davidson, J. C.: Severe Skin Reaction to I.Z.S. Brit. Med. J. 1:614, 1956.
9. Armstrong, C. N., and Lloyd, W. H.: Severe Local and General Reaction to Insulin Zinc Suspension and Soluble Insulin. Brit. Med. J. 2:396, 1954.
10. Lieberman, P.; Patterson, R.; Metz, R., and Lucena G.: Allergic Reactions to Insulin. JAMA. 215:1106, 1971.
11. Patterson, R.; Lucena, G.; Metz, R., et al.: Reaginic Antibody Against Insulin: Demonstration of Antigenic Distinction Between Native and Extracted Insulin. J. Immun. 103:1061, 1969.
12. Dolovich, J.; Schnatz, J. D.; Reisman, R. E.; Yagi, Y., and Arbesman, C. E.: Insulin Allergy and Insulin Resistance: Case Report with Immunologic Studies. J. Allergy. 46:127, 1970.
13. Kreines, K.: The Use of Various Insulins in Insulin Allergy. Arch. Intern. Med. 116:167, 1965.
14. Patterson, R.; O'Rourke, J.; Robert, M., et al.: Immunologic Reactions Against Insulin: I. IgG Antiinsulin and Insulin Resistance. J. Immunol. 110: 1126, 1973.

Colotomy and Polypectomy
(A Review)

Gabriel E. Al-Hajj, M. D.; E. Schrae LaPlante, M. D.; And Bernard Zimmermann, M. D.

POLYPS of the rectosigmoid area within the reach of the 25-cm. sigmoidoscope are easily managed; whereas, those in the more proximal sigmoid present a complicated management problem.

In recent years, surgeons who performed colotomy and polypectomy frequently became aware of the potential hazards of the procedure and observed a high rate of morbidity. A review of 21 cases of colotomy and polypectomy performed at West Virginia University Hospital between 1964 and 1974 is presented.

Materials and Methods

Charts and operative records of the 21 patients who underwent colotomy and polypectomy between 1964 and 1974 were reviewed. The term "complication" is applied to postoperative morbidity directly related to the procedure such as wound infection, suture line disruption, and wound dehiscence. Morbidity common to all operations such as atelectasis and low grade fever was excluded.

The surgeons performing the operation in all cases were surgical residents under staff supervision and used a more or less standard technique in that all protected the wound either with towels or with pads at the time of colotomy. In addition, they closed the colotomy transversely with 3/0 chromic followed by 4/0 silk, except in two cases where two layers of 4/0 silk were used. In one case the colotomy was closed longitudinally.

The patients were followed up in the Outpatient Department after discharge. At least one visit, occurring no less than two weeks postoperatively and with the patient presenting no complaints, was required to consider that the patient had no complications. The problem of colonic stricture was not encountered in any of our patients after long follow-up, and none of them required a second colotomy for a new-appearing polyp.

Prophylactic systemic antibiotics, when used, were usually administered in the immediate postoperative period. Tetracycline was used in two cases, Penicillin and Streptomycin in two cases, Ampicillin in one case, Keflin in one case, and Gentamicin in one case. The non-absorbable antibiotics used were Neomycin in two cases and Kanamycin in three cases. Bowel preparation and prophylactic antibiotics were divided into four groups as summarized in Table 4.

The Authors

- **Gabriel E. Al-Hajj, M. D., Resident in Surgery; E. Schrae LaPlante, M. D., Associate Professor of Surgery; and Bernard Zimmermann, M. D., Professor of Surgery, West Virginia University School of Medicine, Morgantown.**

Most patients presented with rectal bleeding, although in three cases the polyp was found on barium-enema examination as part of a routine work-up and, in one instance, for follow-up of a resected carcinoma.

Nine patients developed postoperative complications. These ranged from a simple wound infection to death (Table 1). Associated diseases were noted (Table 2) but in this series could not be incriminated in the increased morbidity.

In two cases, the sterile sigmoidoscope was used at the time of operation through the colotomy in a search for additional polyps. In one case, another polyp was seen and excised with no postoperative problems. In the other case, however, no additional polyp was found and the patient developed a severe wound infection. Nine preoperative cases were found to have at least one more polyp in the rectosigmoid by proctoscopy.

The majority of polyps obtained by colotomy were adenomatous polyps. Two were juvenile

TABLE 1
Complications

Wound infection	4
Wound abscess	2
Wound dehiscence	1
Colotomy leak, wound dehiscence, colostomy bleeding from wound	1
Colotomy disruption, colostomy, peritonitis renal failure, death	1
Total	9

TABLE 2
Associated Diseases

	Complications	*No Complications*
Diverticulosis	3	4
Diabetes mellitus	0	3
Post anterior resection of sigmoid for carcinoma	0	1
Hypertension	1	0
Chronic obstructive lung disease	1	1
Systemic lupus erythematosus	0	1
Left intraductal breast cancer	0	1
Post esophagectomy and pyloroplasty	0	1
Pregnancy accidentally discovered	1	0
Post Billroth II	1	0
Fascio-scapulo-humeral muscle dystrophy with myasthenia gravis and post toxic nodular goiter	0	1
Hemorrhoids	1	1

polyps and one, villous adenoma. In one case, changes of adenocarcinoma and stalk invasion were described (Table 3). All polyps were in the left colon.

TABLE 3
Pathology

Adenomatous polyp	17
Juvenile polyps	2
Villous adenoma	1
Adenomatous polyp with changes of adenocarcinoma and stalk invasion	1
Total	21

Discussion

Polyps of the colon have been recently shown to occur more frequently than is generally recognized. The incidence of asymptomatic adenomatous polyps alone varies from 1.6 to 12 per cent in the general population. The percentage increases to 70 per cent in necropsy material when a magnifying lens is employed.[1] Half of the adenomatous polyps are found in the sigmoid and 28 per cent in the rectum with the remainder in the more proximal colon.[9] The tendency for colonic polyps to be multiple is now well recognized. In our series, almost half of the patients had at least one more polyp found on preoperative proctoscopy, bearing in mind that colonoscopy with the sigmoidoscope through the colotomy was attempted in two cases only.

Malignant transformation in a polyp has been a controversial subject. Juvenile polyps have been reported to undergo malignant changes very rarely. Villous adenomas have a high incidence of malignant change, and adenomatous polyps frequently develop malignant changes, especially in patients with multiple polyps.[9] The necessity for a safe and adequate management of proximal colonic polyps is obvious.

Deddish and Hertz,[2] in 1955, described a technique of colotomy and colostomy and demonstrated again the shortcomings of x-ray diagnostic techniques. They reported complications in 48 of 106 patients who had no associated resection. The complication related to the procedure, however, was peritonitis in 18 cases—but to a severe degree in only three of the cases. Ileus occurred for four days or more in six cases. Seven patients developed wound infection and a pelvic abscess was reported in one patient.

Kleinfield and Gump[3] reviewed 311 cases of colotomy and polypectomy at Columbia Presbyterian Medical Center. They observed a complication rate of 14 per cent and, in their series, the use of the sigmoidoscope during surgery increased morbidity. Swinton and Weakley,[4] however, reported a 6.7 per cent complication rate in 120 patients who underwent colotomy with colonoscopy through the colotomy, and an eight per cent complication rate in 125 patients where colonoscopy was not performed with the colotomy. They also reported a mortality rate of 0.4 per cent, and 1.6 per cent of the patients required a second operation. Their patients were all prepared preoperatively with laxatives, colonic irrigation, and oral Neomycin. In our series, morbidity was nearly 43 per cent. In Burton's[5] series on postoperative wound infection in colonic and rectal surgery, the two reported colotomy cases developed wound infection.

Prevention of infection in colonic surgery was studied in detail by Altemeier, et al[6] in 1966. They found that those patients who received Neomycin and Phthalylsulfathiazole preoperatively and, in addition, prophylactic postoperative antibiotics, had the highest incidence of staphylococcal enterocolitis. Moreover, those who received only Neomycin sulfate and Phthalylsulfathiazole preoperatively and no postoperative antibiotics, had the highest incidence of wound infection. This is still a debated subject.

Azar and Drapanas[7] studied antibiotics in colonic surgery. They concluded that the use of careful mechanical cleansing of the colon, in addition to a 24 to 36-hour period of preoperative preparation with an oral combination of Neomycin and sulfa or Tetracycline, offered the greatest protection against postoperative wound infection. The routine administration of post-

operative systemic antibiotics to patients who have received antibiotics for preoperative bowel preparation greatly increased the hazards of infection and enterocolitis. In our series, patients who had only mechanical bowel preparation followed by systemic antibiotics had the highest incidence of complications. Three patients who received preoperative non-absorbable antibiotics, together with a mechanical preparation, had no complications. This is in keeping with the extensive work of Cohn[11] on intestinal antisepsis. He reported a surprisingly low incidence of three per cent wound infection in patients who underwent colotomies after a mechanical preparation coupled with intraluminal nonabsorbable antibiotics.

TABLE 4

Bowel Preparation and Prophylactic Antibiosis

	Complications	*No Complications*	*Total*
Mechanical Bowel Preparation	3	6	9
Mechanical Preparation and Nonabsorbable antibiotics	0	3	3
Mechanical Prepartion and Systemic antibiotics	5	1	6
Mechanical Preparation, Nonabsorbable antibiotics and systemic antibiotics	1	2	3
Total			21

In recent literature, polypectomy with the colonoscope has been gaining popularity. Wolff and Shinya,[10] in a series of 600 patients, reported a fantastically low rate of complications consisting mainly of bleeding controlled without operative intervention.

References

1. Turell, R.: Colorectal Polyps. Cancer. 23:91, 1973.
2. Deddish, M. R., and Hertz, R. E.: Colotomy and Coloscopy in the Management of Mucosal Polyps and Cancer of the Colon. Am. J. Surg. 90:846, 1955.
3. Kleinfield, G., and Gump, F. E.: Complications of Colotomy and Polypectomy. Surg., Gynecol., Obstet. 111:726, 1960.
4. Swinton, N. W., and Weakley, F. L.: Complications of Colotomy and Colonoscopy. Dis. Colon Rectum. 6:50, 1963.
5. Burton, R. C.: Postoperative Wound Infection in Colonic and Rectal Surgery. Br. J. Surg. 60:363, 1973.
6. Altemeier, W. A.; Hummel, R. P., and Hill, E. O.: Prevention of Infection in Colon Surgery. Arch. Surg. 93:226, 1966.
7. Azar, H., and Drapanas, T.: Relationship of Antibiotics to Wound Infection and Enterocolitis in Colon Surgery. Am. J. Surg. 115:209, 1968.
8. Livstone, E. R.; Greene, F. L., and Troncale, F. J.: Colonoscopic Polypectomy: A Caveat. N. Engl. J. Med. 288:1304, 1973.
9. Peters, L. L., and Watne, A. L.: Common Polypoid Lesions of the Colon and Rectum: Their Significance and Management. W. Va. Med. J. 70:5, 1974.
10. Wolff, W. I., and Shinya, H.: Modern Endoscopy of the Alimentary Tract. Curr. Probl. Surg. Jan., 1974.
11. Cohn, I.: Intestinal Antisepsis. Thomas, Springfield, Ill., 1968.

Enzyme Replacement?

ENZYMES, those chemical catalysts for living organisms, have been considered for possible use against a number of human diseases, but the body's own immune response system destroys foreign enzymes before they can be of use.

A research team at Rutgers University in New Brunswick, New Jersey has successfully masked fungus enzymes so that the defense mechanisms of laboratory animals do not recognize them as foreign bodies and thus destroy the injected material.

Treatment Of Hemorrhagic Radiation Cystitis With Formalin

John A. Belis, M. D.; and D. Franklin Milam, M. D.

MANAGEMENT of persistent, massive, vesical hemorrhage has been a urologic dilemma accompanied by a high mortality rate, particularly in debilitated patients who are not candidates for major operative intervention. Previously reported modalities utilized in attempts to combat this problem have included pharmacologic agents (amicar, aqua-mephyton), urethral catheterization or suprapubic cystostomy followed by continuous irrigation, transurethral fulguration of bleeding vessels, intravesical hydrostatic balloon pressure, ureteral catheterization, supravesical urinary diversion, internal iliac artery ligation, and cystectomy.[1-4] Uniform success has not been obtained with any of these procedures.

The etiology of massive hemorrhagic cystitis is usually associated with pelvic malignancy, pelvic irradiation for malignancy, or cyclophosphamide therapy. Often, the hemorrhage is secondary to direct extension of tumor, particularly those originating in the bladder, cervix or prostate. Hemorrhage caused by radiation, however, has been reported to occur as soon as two months or as long as five years after treatment.[5] Hemorrhagic cystitis as a complication of cyclophosphamide therapy was first reported in 1959;[6] and, when secondary to this chemotherapeutic agent, it is usually massive and persistent, associated with diffuse involvement of the bladder with thin-walled subepithelial capillaries and areas of telangiectasia.[7,8] It usually occurs during or soon after administration of the drug, but has been reported as late as 21 months following therapy.[9] Investigation of the effects of cyclophosphamide on the bladder of rats revealed that damage was probably caused by local contact of the bladder wall with urine containing toxic metabolites of the drug.[10]

The Authors

- **John A. Belis, M. D., Resident, Division of Urology; and D. Franklin Milam, M. D., Professor of Surgery and Chairman, Division of Urology, West Virginia University School of Medicine, Morgantown.**

The instillation of formalin into the bladder to control intractable bleeding was first reported by Brown, in 1969, in a series of 24 patients with carcinoma of the bladder.[11] Five patients in this series required re-instillation of formalin for recurrent bleeding, but overall results were good. Other reports from authors utilizing this therapeutic modality are presented in Table 1.[3-5,12,13] Two patients with intractable vesical hemorrhage secondary to pelvic irradiation recently have been treated at West Virginia University Medical Center. Technique, indications, complications, and controversies associated with formalin therapy will be discussed.

Methods

Intravenous pyelograms were obtained prior to formalin treatment. Cystoscopy was performed under general or regional anesthesia as instillation of formalin into the bladder can be moderately painful. The bladder was inspected for specific bleeding points or recurrent malignancy. When diffuse hemorrhage was observed, no attempt at coagulation or biopsy was made. All clots were then thoroughly evacuated from the bladder. A

TABLE 1
Formalin Instillation For Massive Vesical Hemorrhage

Author	*No. of Patients*	*No. of Patients Requiring Reinstillation*	*% Formalin*	*Etiology of Hemorrhage*
Brown, 1969	24	5	10	Carcinoma of bladder
Firlit, 1973	6	2	10	Pelvic malignancy
Shah, 1973	12	3	4	Radiation, malignancy, cytotoxic drugs
Barakat, 1973	2	2	10	Radiation (1), cyclophosphamide (1)
Fair, 1974	18	4	10 (4 cases)	Radiation (16), cyclophosphamide (2)
			1 (14 cases)	
McGuire, 1974	5	3	10	Radiation

gravity cystogram was performed to rule out occult bladder perforation, vesicoureteral reflux, or bladder fistulas. Patients with Grade I vesicoureteral reflux were placed in Fowler's position throughout the instillation procedure.

In females, the vagina was packed to protect it against formalin leakage around the catheter. A No. 18F, 5cc. Foley catheter was inserted and 60 to 80cc. of ten per cent formalin instilled into the bladder by gravity filling. The Foley catheter balloon was deflated and the catheter was held in place but not clamped so that formalin might escape in the event of bladder contraction. Formalin was permitted to remain in the bladder for 15 minutes and was then drained. The bladder was copiously but gently irrigated with distilled water irrigating solution. A No. 18F, 5cc. Foley catheter was left indwelling for 24 to 48 hours. Antibiotic coverage was provided.

Case Reports

Case 1. A 55-year-old white woman was admitted to West Virginia University Medical Center with a two-week history of intermittent hematuria followed by a 12-hour history of persistent gross hematuria accompanied by mild suprapubic pain and dysuria. This patient was treated 23 months earlier with internal irradiation and hysterectomy for carcinoma of the cervix. Nine months prior to admission, she was again irradiated internally and externally (Cobalt^{60}) to a final total of 7,000 rads for recurrent carcinoma of the cervix. Since that time, she developed several mild episodes of radiation enteritis and cystitis without hemorrhage, all of which had been satisfactorily treated conservatively.

Figure 1. IVP demonstrating diminished function of the right kidney and re-duplicated left collecting system.

Figure 2. Normal gravity cystogram.

Physical examination on admission revealed a thin female with minimal discomfort. Blood pressure was 130/90 and pulse was 92 and regular. The remainder of the examination was negative except for moderate suprapubic tenderness. The bladder was not palpable.

Laboratory and x-ray findings included: Hemoglobin 9.3 gm. per 100 ml. and hematocrit 27.4 per cent. White blood count, platelet count, serum creatinine, BUN, chest x-ray, and EKG were normal. Plain abdominal x-rays revealed paralytic ileus. Intravenous pyelogram revealed poor function on the right side with a reduplicated collecting system on the left side (Figure 1). Urine culture showed no infection.

A No. 18F 3-way Foley catheter was placed into the bladder; blood clots were evacuated;

and continuous bladder irrigation with normal saline was initiated.

The vesical hemorrhage continued unchanged over a 24-hour period and transfusion of two units of blood was required. The patient was then taken to the operating room where formalin instillation was performed. Gravity cystogram prior to instillation was normal (Figure 2).

The urine cleared almost immediately: there was no further hematuria, and urine output remained good. The Foley catheter was removed 24 hours following the procedure; ileus subsided; and vesical hemorrhage has not recurred.

Case 2. A 69-year-old white female presented at West Virginia University Medical Center with a 24-hour history of gross hematuria with clots. In 1966, this patient underwent abdominoperineal resection for squamous cell carcinoma of the anus. The patient had a satisfactory course until 1971 when recurrence of tumor occurred in the vagina. The patient was treated with a combination of 3,500 rads internal irradiation and 6,000 rads external Cobalt^{60} irradiation. Since that time, she has had radiation cystitis and enteritis which has been satisfactorily controlled. There has been no further evidence of recurrent malignancy.

Figure 3. IVP demonstrating bilateral hydroureters.

Figure 4. Cystogram demonstrating left vesicoureteral reflux.

Physical examination revealed a pale, thin, elderly female in no distress. Blood pressure was 110/70, and the pulse was 88 and regular. The abdomen was normal. Pelvic examination was compatible with radiation changes without evidence of tumor.

Laboratory and x-ray findings included: Hemoglobin 10.2 gm. per 100 ml. and hematocrit 30.7 per cent. All other laboratory studies, chest x-ray, and EKG were normal. Intravenous pyelogram showed bilateral hydroureters (Figure 3). Urine culture and sensitivity grew greater than 100,000 colony count of Streptococcus faecalis sensitive to Ampicillin.

Following evacuation of clots, continuous bladder irrigation with normal saline was instituted. Over a 48-hour period, the hemorrhage continued and required transfusion of four units of blood to maintain a hemoglobin of 9-10 grams per ml. The patient underwent formalin instillation procedure in Fowler's position as cystogram and postevacuation bladder x-ray (Figure 5) demonstrated Grade I vesicoureteral reflux on the left side. Hematuria immediately decreased markedly and the urine cleared completely with-

Figure 5. Postevacuation cystogram demonstrating left vesicoureteral reflux.

in 48 hours. Hemorrhage has not recurred and no complications have ensued.

Discussion

Formalin rapidly scleroses the bladder mucosa and submucosa through precipitation of proteins by reducing and uniting with protein amino groups.[11] Posttreatment cystoscopy has been reported to demonstrate a pale, avascular-appearing mucosa throughout the bladder.[3] Degree of penetration of 10 per cent formalin beyond superficial layers of the bladder has been controversial, ranging from minimal penetration and no systemic absorption in both men[11] and mice,[12] to intense transmural inflammation noted in rats.[14] Bladder instillation of 1 per cent in rats continued to produce mucosal changes, but without a surrounding intense inflammatory reaction.[14] A majority of authors have reported use of 10 per cent formalin with generally successful control of vesical hemorrhage; although, reinstillation of formalin was required in approximately 25 per cent of patients (Table 1).[3,5,11,13]

Instillation of 10 per cent formalin solution, however, into the bladder is not without hazard and serious complications have been reported following the procedure (Table 2).[5,7,12,15,17] Complications appear to be related principally to depth of fixation of the bladder and ureteral orifices and to vesicoureteral reflux. Nearly all complications have been associated with 10 per cent formalin and many have occurred when formalin was instilled following other procedures such as fulguration or biopsy. Certain complications associated with vesicoureteral reflux occurred in patients who did not have a gravity cystogram prior to the procedure. Furthermore, nearly half of all reported complications occurred during a second or third procedure in the same patient (Table 2). A gravity cystogram should be routine prior to every formalin treatment. All clots should be evacuated to prevent an unsatisfactory result secondary to insufficient contact of formalin with bladder mucosa. Irrigation following the procedure, while thorough, should not be unusually vigorous.

Complications associated with vesicoureteral reflux may be prevented in most cases by placing the patient in Fowler's position, instilling the formalin by gravity, and allowing the catheter to remain elevated 15 cm. above the bladder and unclamped during the procedure. A promising technique for preventing vesicoureteral reflux by placement of #4F Fogarty embolectomy catheters in each involved ureter and inflating the Fogarty catheter balloons has also been reported.[18]

TABLE 2

Reported Complications Of Formalin Instillation For Massive Vesical Hemorrhage

Author	*No. of Patients*	*No. of Reinstillations Per Patient*	*% Formalin*	*Complications*
Kalish, 1973	1	1	10	Renal papillary necrosis
Spiro, 1973	1	0	4	Bilateral ureterovesical obstruction
Barakat, 1973	1	1	10	Decreased bladder capacity
Scott, 1974	1	0	10	Bladder rupture
Fishbein, 1974	1	1	10	Bilateral ureterovesical obstruction
Fair, 1974	3	0	10	Hydronephrosis, bilateral ureterovesical reflux, decreased bladder capacity, ureteral fibrosis

Prevention of deep fixation of the bladder and ureteral orifices may be achieved by maintaining a short instillation time (10-15 minutes) or by decreasing the formalin concentration. Satisfactory control of hemorrhage has been reported with 4 per cent formalin[13] as well as 1 per cent formalin.[5] In addition. the use of a moderate quantity of formalin (60-80cc.) to achieve contact with bladder mucosa without marked bladder distention seems advisable.

Increased incidence of complications with repeated instillation in the same patient. when hemorrhage does not subside or recurs soon after the first procedure, suggests need for caution when a repeat procedure is considered. A gravity cystogram should be performed prior to any re-instillation. All patients should have intravenous pyelograms at intervals following the procedure.

Biopsy of the bladder immediately before introduction of formalin should be avoided. This may present a future dilemma as one recent report noted two cases of transitional cell carcinoma of the bladder in patients who had received cyclophosphamide.[19] Further investigation will be necessary to establish or refute this hypothesis. Therefore. bladder biopsy in suspected cyclophosphamide cystitis should, at this time, remain limited to cases in which massive hemorrhage is not present.

In conclusion, the use of formalin in treatment of massive vesical hemorrhage is a useful procedure in selected cases associated with extension of malignancy into or within the bladder, radiation cystitis, or cyclophosphamide cystitis. Extreme caution, however, must be taken to attempt to avoid serious complications. Long term evaluation of patients having this procedure will be necessary to determine the incidence and severity of complications such as bladder fibrosis and reduced bladder capacity. Finally, the use of other topical agents such as phenol[20] will also require further investigation regarding efficacy and toxicity.

Summary

Indications. technique, complications, and controversies regarding formalin instillation for massive vesical hemorrhage have been discussed. Two cases in which this procedure has been utilized at West Virginia University Medical Center have been presented.

Addendum

The two cases presented have had no recurrence of vesical hemorrhage one year following formalin instillation. Five of six additional cases have been successfully treated over the past year utilizing this technique.

References

1. Goldstein, A. G.; D'Escrivan, J. C., and Allen, S. D.: Haemorrhagic Radiation Cystitis. Brit. J. Urol. 40:475, 1968.
2. Lapides, J.: Treatment of Delayed Intractable Hemorrhagic Cystitis Following Radiation or Chemotherapy. J. Urol. 104:707, 1970.
3. Firlit, C. F.: Intractable Hemorrhagic Cystitis Secondary to Extensive Carcinomatosis: Management with Formalin Solution. J. Urol. 110:57, 1973.
4. McGuire, E. J.; Weiss, R. M.; Schiff, M., and Lytton, B.: Hemorrhagic Radiation Cystitis. Urology. 3:204, 1974.
5. Fair, W. R.: Formalin in the Treatment of Massive Bladder Hemorrhage. Urology. 3:573, 1974.
6. Coggins, P. R.; Ravdin, R. C., and Eisman, S.: Clinical Pharmacology and Preliminary Evaluation of Cytoxan (Cyclophosphamide). Can. Chemother. Rep. 3:9, 1959.
7. Spiro, L. H.; Hecht, H.; Horovitz, A., and Orkin, L.: Formalin Treatment for Massive Bladder Hemorrhage. Urology. 2:669, 1973.
8. Javadpour, N., and Barakat, H. A.: Bladder Toxicity Due to Cyclophosphamide. Urology. 2:634, 1973.
10. Philips, F. S.; Sternberg, S. S.; Cronin, A. P., and Vidal, P. M.: Cyclophosphamide and Urinary Bladder Toxicity. Cancer Res. 21:1577, 1961.
11. Brown, R. B.: A Method of Management of Inoperable Carcinoma of the Bladder. Med. J. Aust. 1:23, 1969.
12. Barakat, H. A.; Javadpour, N., and Bush, I. M.: Management of Massive Intractable Hematuria. Urology. 1:351, 1973.
13. Shah, B. C., and Albert, D. J.; Intravesical Instillation of Formalin for the Management of Intractable Hematuria. J. Urol. 110:519, 1973.
14. Rankin, K. N.; Intravesical Formalin. Invest. Urol. 12:150, 1974.
15. Kalish, M.; Silber, S. J., and Herwig, K. R.: Papillary Necrosis, Result of Intravesical Instillation of Formalin. Urology. 2:315, 1973.
16. Scott, M. P.; Marshall, S., and Lyon, R. P.: Bladder Rupture Following Formalin Therapy for Hemorrhage Secondary to Cyclophosphamide Therapy. Urology. 3:364, 1974.
17. Fishbein, P. G.; McCurdy, D. K.; DeFronzo, R. D., and Murphy, J. J.: Irreversible Bilateral Ureteral Obstruction from Intravesicle Formaldehyde Solution. J. A. M. A. 228:872, 1974.
18. Gottesman, J., and Ehrlich, R. M.: Preventing Vesicoureteral Reflux During Intravesical Formalin Instillation. Urology. 3:494, 1974.
19. Dale, G. A., and Smith, R. B.: Transitional Cell Carcinoma of the Bladder Associated with Cyclophosphamide. J. Urol. 112:603, 1974.
20. Susan, L. P., and Marsh, R. J.: Phenolization of Bladder in Treatment of Massive Intractable Hematuria. Urology. 5:119, 1975.

Ultrasonic Evaluation Of The Abdominal Aorta

Michael T. Hogan, M. D.

An early, correct diagnosis of an abdominal aortic aneurysm is imperative; yet, in certain circumstances this correct diagnosis may prove to be a difficult clinical problem. When there is a definite pulsatile expansile mass, there is no difficulty. All cases, however, do not manifest themselves in this way and the diagnosis may be very elusive. During the past 15 months at the West Virginia University Hospital we have used diagnostic ultrasound to evaluate the abdominal aorta in 60 patients.

The procedure is non-invasive, rapid, atraumatic, and may be performed on an outpatient basis. The patient lies supine and a 2.25 megahertz ultrasound B-scan transducer is passed over the abdominal skin surface at 0.5 cm. intervals. This is performed in both longitudinal and transverse directions. The transducer acts as both a transmitter and receiver and it will portray the anatomy of the aorta on a storage oscilloscope. From this a permanent record can be made.

Results

Fifty-six of the 60 patients had successful ultrasonic evaluations of their aorta. Four were technically unsuccessful due to a large amount of intestinal gas which obscured the aorta. One patient was lost to follow-up.

Twenty-seven ultrasonic examinations were described as being normal. Five of these subsequently had aortograms which were also described as normal. These five, as well as the remaining 22 normal cases, were sent home without further work-up. On clinical follow-up they have had no further symptoms or signs related to an abdominal aneurysm.

The ultrasonic examination demonstrated 28 aneurysms. Fifteen had surgical verification of an abdominal aneurysm. Four others had arteriography which confirmed the presence of an aneurysm; however, these four, as well as eight others having ultrasonic evidence of an aneurysm, never went to surgery because of patient refusal or another medical consideration.

One patient described as having an aneurysm on ultrasonic examination subsequently was found to have a lymphomatous mass resting on the aorta. No other evidence of lymphoma was present.

The Author

- **Michael T. Hogan, M. D., Department of Radiology, West Virginia University School of Medicine, Morgantown.**

Discussion

If abdominal aneurysms present with the classic features of the disease, it is a simple diagnosis. In the obese patient, however, the aorta may not be palpable while in the thin patient the aorta may seem to pulsate too vigorously. Occasionally a tortuous aorta, an abdominal mass adjacent to the aorta, adhesions from a previous laparotomy or a pseudoaneurysm due to a scoliotic or lordotic lumbar spine may simulate an aneurysm.[5] In a significant percentage of cases neither the history, nor the physical, nor the

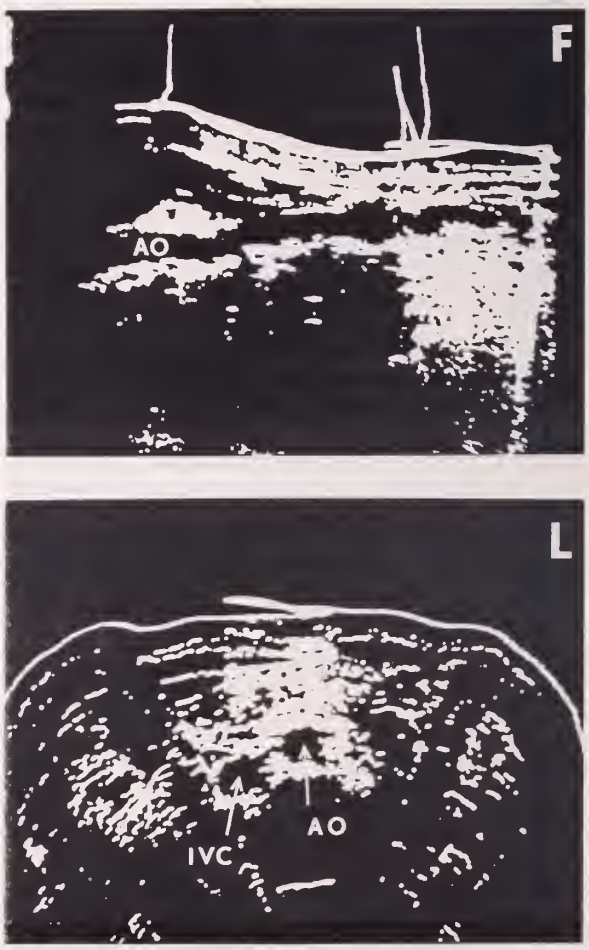


Figure 1. Longitudinal (F) and transverse (L) ultrasonic scans demonstrate a normal aorta. AO (aorta), IVC (inferior vena cava), L (left), F (feet).

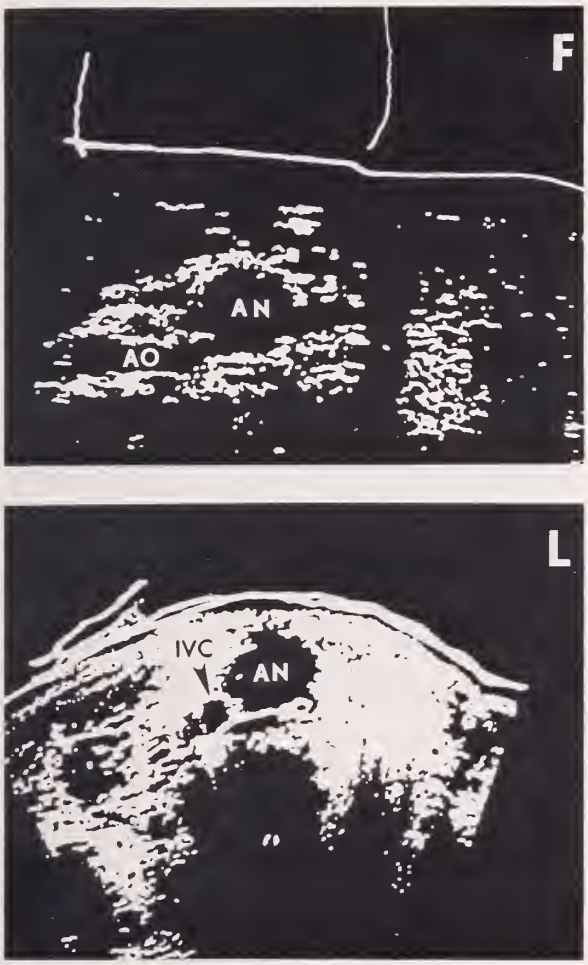


Figure 2. Longitudinal (F) and transverse (L) ultrasonic scans demonstrate an aortic aneurysm. AO (aorta), AN (aneurysm), IVC (inferior vena cava), F (feet), L (left).

plain radiographs provide enough information. In the cases reported by Estes,[1] 30 per cent of the patients had no symptoms referable to an aneurysm, seven per cent had no physical findings and 14 per cent of the radiographs did not demonstrate an abnormality.

Aortography also has certain limitations. It portrays the central lumen of the aorta but does not outline the formed thrombus within the wall. It also has a certain morbidity associated with it, is time consuming, and requires hospitalization.

Ultrasonic portrayal of the aorta is a useful adjunct to the above diagnostic methods. In a single longitudinal scan, the aorta can be traced from the level of the tenth dorsal vertebra to the bifurcation,[4] while in the transverse scan, the entire circumference of the aorta at a particular level can be outlined (Figure 1). When an aneurysm is present, the normal aorta can be traced into the aneurysmal dilatation on the longitudinal scan, while on the transverse scan the entire circumference of the aneurysm will be outlined (Figure 2). The length, width and depth of the aneurysm can then be calculated. Leopold[3] found the discrepancy between operative or aortography measurements and the ultrasonic value never to exceed 6 mm. Goldberg[2] also found the echographic measurements to approximate caliper measurements of the surgical specimens.

Rarely, ultrasonic evaluation of the aorta is unsuccessful. Since gas almost completely reflects ultrasound and prevents penetration, gas filled intestines will prevent ultrasonic visualization of the aorta.

Summary and Conclusion

Ultrasound provides an accurate, safe, rapid and non-invasive means of evaluating the abdominal aorta. Because of these features it is an invaluable aid not only in the initial evaluation of a patient with a possible abdominal aneurysm but also as a means of providing serial follow-up for such patients or as a screening procedure for a large volume of patients.

References

1. Estes, J. E.: Abdominal Aortic Aneurysm: A Study of 102 Cases. Circulation. 2:258-264, July, 1950.
2. Goldberg, B. B.: Ultrasonic Aortography. J. A. M. A. 198:353-358, Oct., 1966.
3. Leopold, G. R.: Ultrasonic Abdominal Aortography. Radiology. 96:9-14, July, 1970.
4. Leopold, G. R.: Abdominal Ultrasonography. In: Diagnostic Ultrasound; King, D. L., Editor. Saint Louis, 1974, C. V. Mosby Co.
5. Steinberg, I., and Stein, H. L.: Visualization of Abdominal Aortic Aneurysms. Am. J. Roentgen. 95:684-695, Nov., 1965.

A message from . . .

The President

HOW ABOUT THIS, AMA?

ONE of the many pleasant experiences afforded me while attending the American Medical Association convention in Hawaii was an opportunity to share views with many "grass root" doctors from other states. Several expressed concern, and I believe legitimately, on behalf of private practicing physicians across the country as they relate to the AMA.

The primary concern of some of these physicians was the AMA's blessing and support of the Comprehensive Health Care Insurance Act of 1975, the latest version of Medicredit. I share their concern, and believe the AMA should admit it was in error when it began promoting its own form of National Health Insurance as a defensive mechanism against the "inevitable."

Objectively, the AMA should carefully study its successes in the past with Federal legislation. Medicare was fought with Eldercare, and many of the worst features of Eldercare were thrown into Medicare. Kerr-Mills was AMA-supported and brought on the Title XVIII mess in Medicare. PSRO was an offspring of the AMA's PRO in Medicredit.

I would challenge the loose usage and the rationalization demonstrated in the word "INEVITABLE" as it relates to NHI.

My challenge is not without reference, as it stems directly from the Congressional Record wherein was recorded recently an analysis of a proposed NHI, its cost and reasons why it is making headway. One major reason it is progressing is the AMA, which takes the position that NHI is INEVITABLE. When the people whose interests are most vitally affected by that vicious doctrine of inevitability talk this way, it becomes a self-fulfilling prophecy because the people who are best qualified to lead the opposition have already thrown in the sponge.

The AMA countered the absurd claim of Senator Kennedy and others that there was a medical care "crisis" by accepting his premise and offering a substitute bill. Well, first of all, there is no "crisis." Secondly, the last thing you do in a debate is concede your opponent's premise because you are then saddled with his alternatives. The AMA should have done its home work, marshalled the evidence, developed the statistical facts, and then taken the battle right back to the advocates of NHI.

The real crisis to which we must address ourselves is the possibility of Federal bankruptcy, with a proposed more than four hundred billion-dollar budget in fiscal 1976. To quote a member of Congress, "This is no time even to think of passing spendthrift legislation like NHI."

The Feds don't really want it, the people don't really want it—I really don't want it—

How about you, AMA?

Jack Leckie

JACK LECKIE, M. D., *President*

THE WEST VIRGINIA MEDICAL JOURNAL

Official Organ of the West Virginia State Medical Association

The Publication Committee is not responsible for the authenticity of opinion or statements made by authors or in communications submitted to this Journal for publication. The author or communicant shall be held entirely responsible

Editor
GEORGE F. EVANS, M. D.
122 South Sixth St.
Clarksburg, W. Va.

Managing Editor and
Business Manager
MR. CHARLES R. LEWIS
Box 1031
Charleston, W. Va. 25324

Associate Editors:
VERNON E. DUCKWALL, M. D.
Elkins
JOHN M. HARTMAN, M. D.
Charleston
THOMAS J. HOLBROOK, M. D.
Huntington
JOE N. JARRETT, M. D.
Oak Hill
EDWARD J. VAN LIERE, M. D.
Morgantown
STEPHEN D. WARD, M. D.
Wheeling

Published monthly on the first day of the month, at Charleston by the West Virginia State Medical Association. Original articles are accepted on condition that they are contributed exclusive to the Journal. Advertising rates furnished on request.

Address all communications to Business Manager, West Virginia Medical Journal, Box 1031, Charleston, West Virginia 25324. Phone 346-0551.

EDITORIALS

THE GOOD OLD DAYS: HOPEFULLY, WE CAN RETURN!

Most of our Association members will remember when pages of *The West Virginia Medical Journal* were filled with paid advertising from national pharmaceutical houses. If any of our older members happen to have a copy of the December, 1956, issue of *The Journal* on file, please take a few minutes out from your busy practice to look over the advertising section. Wasn't it nice?

We hope you will forgive us for reminiscing for a few minutes, but our recent trip to Chicago to attend the State Medical Journal Advertising Bureau's 1975 Biennial Conference caused this nostalgia.

Our first session when we arrived at O'Hare Inn was in the form of a panel discussion by representatives of the advertising media who told the editors, business managers and "girl Fridays" just what advertisers were looking for these days in state journals. These very nice, bright and personable people let us know that one of the most important items receiving particular attention in state journals is continuing medical education information. Each pharmaceutical firm, of course, is looking for the journal which will give it the most for its money. That was the first reference to money we heard at the conference, but we heard it many times during the remainder of the two-day session.

It seemed to us that the word was overused, although we recognized that this probably was because of current economic conditions. Every business is finding itself in a generally similar position—not only state journals and advertisers.

Some of the state journals' representatives at the conference told us that they felt the pharmaceutical people were, in a sense, now neglecting the grass-roots level—the practicing physician—by not advertising their products in state journals. Some felt that the doctors had supported the drug firms by boosting the sale of their products down through the years, now only to find firms were outgrowing state journals and going more for the "Madison Avenue approach to advertising—the mostest for the leastest."

Personally, we can understand this to a great degree. Again taking the economy into account, everyone is looking for the "best buy." The goal of the advertiser is not simply to support a state journal, but to sell a product.

Even though *The West Virginia Medical Journal* does not have the advertising it once had, and our magazine is a great deal smaller than it was several years ago, we are most appre-

ciative of those firms that have stood by us. We are trying to understand the problems of others.

We do say this: the conference was not a total loss—far from it—we feel. We learned quite a bit at our first one and came back to the headquarters offices with some good ideas as well as constructive criticism. Some of our ideas may be adopted; some, of course, will fall by the wayside. We know this for sure—the Editor of this *State Journal* and his "girl Friday" who attended the 1975 Conference in Chicago are determined to do our best to improve *The West Virginia Medical Journal.* We want our *Journal* to become so tempting that national pharmaceutical firms will want to advertise with us—not just to help us in the hour of need, but because they feel that advertising in our *Journal* will indeed give them the most advertising exposure for the least amount of money. There goes that word again!

The first idea we want to try is a readership survey. We want our members to tell us just how much of our *Journal* they actually read, what sections they prefer, and offer some suggestions on improving its quality. The readership survey can be found as an insert in this issue of *The Journal.* Please take a few minutes of your time right now. Answer the questions and drop the survey in the mails.

Your Editor and Associate Editors, as well as the headquarters staff, thank you in advance for your usual and splendid cooperation. We feel sure you, too, want your *Journal* to be among the best in the nation.

And, once again, we sincerely thank our advertisers.

A STANDOUT IN A FIELD WHERE THAT'S NOT EASY

Outstanding physicians are not uncommon in a community like Morgantown which is well supplied with fine practitioners of the healing arts. Which makes it all the more difficult for a doctor to leave behind him a legacy of truly conspicuous service and dedication to the public welfare.

Dr. G. Ralph Maxwell, who died unexpectedly yetserday less than six months after retiring from active practice, was that kind of man.

He had practiced in Morgantown for a full 50 years and was one of the city's most widely respected and loved physicians. But he was also honored in his profession. One of his principal interests was diseases of the chest, and when the State association established an award for outstanding work in that field, it named him as the first recipient. His standing also was indicated by the fact he spent 43 years as a faculty member of the WVU medical school, during the years it was a two-year college as well as after the present school opened.

Doctor Maxwell's dedication to the public was demonstrated in a special way by his establishment of chest clinics in both Morgantown and Fairmont. He worked with the Fairmont clinic for 30 years, and the Morgantown operation for five decades. And he served terms as President of the West Virginia Tuberculosis Association and the State Thoracic Society.

Doctor Maxwell's pending retirement was the occasion for a special testimonial dinner which brought a great outpouring of affection and appreciation from the community, his many patients and friends. He will be remembered as a very special man in a field where outstanding accomplishment is considered almost the norm.

—Dominion-Post, Morgantown
December 30, 1975

Editor's Note: See editorial, "Surprise Party for Dr. Maxwell," in the April, 1975, issue of *The Journal.* Doctor Maxwell's obituary is on Page xvi of this issue of *The Journal.*

Our Readers Speak

LARGEST BABY

The child at birth rarely exceeds 11 lbs. in weight. The largest stillborn baby ever delivered vaginally weighed 24 lbs. (Moss) and the largest baby born alive, vaginally, weighed 23 lbs. as reported by the Beach of Selville, Ohio, in 1879. The baby lived for 11 hours.

The largest baby on record delivered vaginally without complications here in Clarksburg, West Virginia weighed 14.75 lbs. (Mahmoodian). The father is 5 feet, 9 inches tall and the mother is 5 feet, 7 inches tall, with an average weight of 130 lbs.

Saeed Mahmoodian, M. D.
208 Goff Building
Clarksburg, W. Va. 26301

GENERAL NEWS

AMA President Honor Guest At 109th Annual Session

Dr. Richard E. Palmer of Alexandria, Virginia, President Elect of the American Medical Association, will be among the honor guests at the 109th Annual Meeting of the West Virginia State Medical Association which will be held at The Greenbrier in White Sulphur Springs, August 18-21.

Dr. Robert D. Hess of Bridgeport, Chairman of the Program Committee, said Doctor Palmer has accepted an invitation to speak at the first session of the House of Delegates on Wednesday afternoon, August 18. Doctor Palmer, a pathologist, will be installed as President of the American Medical Association during the annual meeting at Dallas in June. He will succeed Dr. Max H. Parrott of Portland, Oregon, the current President.

Doctor Palmer has been Chairman of the AMA's Board of Trustees since October, 1973. He previously had been Vice Chairman.

Richard E. Palmer, M. D.

Doctor Palmer was elected to the AMA Board of Trustees in 1969. Prior to becoming a member of the Board, he was a member of the AMA's Council on Medical Service and its committees on Health Care of the Poor and Government Medical Services.

Doctor Palmer earned his A.B. and M.D. degrees at George Washington University in Washington, D. C., and interned at the University Hospital. He was a senior resident in pathology there in 1948-49. Since 1963, he has been Associate Clinical Professor at the University's school of medicine.

Doctor Palmer was a Captain in the Army Medical Corps from 1946 to 1948, assigned as Director of Laboratories at the U. S. Military Hospital, West Point, New York.

Since 1949, he has been a pathologist at Alexandria Hospital, where he was President of the medical staff in 1953. He also has been a pathologist at Circle Terrace Hospital Laboratory in Alexandria since 1955, and was President of the medical staff there in 1958. Since then, he has served on the hospital's board of directors.

In February, 1973, Doctor Palmer was installed as President-Elect of the 3,500-member International Academy of Pathology. He previously served the organization as a member of its executive council and was Vice-President in 1972.

He also has been President of the Alexandria Society (1955); American Society of Clinical Pathologists (1961-62); Medical Society of Virginia (1964); George Washington University Medical Alumni Association (1965-66) and the Private Practitioners of Pathology Foundation (1966-67).

He is a Diplomate of the American Board of Pathology and is now serving his second six-year term as one of its trustees. He was elected to his first term in 1967 and re-elected in 1973. Doctor Palmer currently is a member of the American Board of Pathology's Executive Committee. A life member of the American College of Physicians, he became a Fellow of that organization in 1965.

In 1968, he won an American Pathology Foundation award for meritorious service to pathology, and received the George Washington University Alumni Achievement Award in 1971.

Doctor Palmer was Chairman of the Board of Commissioners of the Joint Commission on Accreditation of Hospitals in 1970-72. He has served as a commissioner representing the AMA since 1966 and was Chairman of the JCAH Standards Committee from 1967 to 1971.

Doctor Palmer was the 1974 recipient of the Pathologist's Distinguished Service Award jointly presented by the American Society of Clinical Pathologists and the College of American Pathologists. At the same meeting he became the first pathologist to receive a new Continuing Medical Education Award established jointly by those two organizations; and also the first pathologist to qualify directly for the AMA's Physician's Recognition Award for Continuing Medical Education on the basis of having earned that joint certification.

Doctor Palmer is President of the XI Congress of the International Academy of Pathology and also of the 2nd World Congress of Academic and Environmental Pathology to be held in Washington, D. C. in October, 1976.

He is a member of the College of American Pathologists, the American Society of Clinical Pathologists, the American Association of Blood Banks and the American Society of Nuclear Medicine. He served on a National Research Council ad hoc committee that studied pathology manpower needs.

Scientific Sessions Take Shape

Doctor Hess likewise has announced that a number of prominent physicians and surgeons have accepted invitations to present papers at the Annual Meeting's three general scientific sessions to be held on Thursday, Friday and Saturday mornings.

Names of other guest speakers, and program details, will be provided in future issues of *The Journal*, but Doctor Hess said that the first scientific session on Thursday, August 19, will offer a "Symposium on Pulmonary Diseases."

Schedule for Business Meetings

Current indications point to an increased number of breakfast, and other, scientific and business meetings of sections and societies affiliated with the Medical Association on Friday and Saturday.

The Medical Association's Council will hold its pre-convention meeting on Wednesday morning, August 18. The first session of the House of Delegates on Wednesday will be followed by the second and final session on Saturday, August 21.

Malpractice Insurance Bill Goes To Legislature

As this issue of *The Journal* was being prepared for the printer, a history-making professional liability insurance bill was ready for introduction into both houses of West Virginia's Legislature.

The "legislative findings" prepared for the bill said, in draft form: "A legislative remedy is necessary to make it possible to attract new physicians; for physicians to continue to practice medicine in the state; and for hospitals to continue to operate; all with adequate professional liability coverage at affordable rates for all participants in the health care system." The findings added:

"The purpose of this bill is to ensure that professional liability coverage will be available at an affordable cost in order that our health care system does not collapse, making health care unavailable."

The comprehensive piece of legislation, proposing a $500,000 maximum on recovery in a malpractice action; tightening the statute of limitations under which actions might be brought; providing for a review, or screening, panel; establishing a mechanism for a joint underwriting association to insure availability of insurance if the need for the JUA should arise, and writing new burden-of-proof and other language into law, was prepared by the Legislature's Subcommittee on Health.

Substantial Medical Association input into the bill has been made over the past several months, in cooperation with several other groups and organizations, including the bar, judiciary, insurance industry, hospitals and other health care providers.

The legislation obviously must clear a number of formidable hurdles if final passage of any of it results by early March. Further committee hearings likely will be long and complex. No one anticipates that enactment of such legislation will bring an immediate drop in the cost of malpractice insurance.

But through the efforts of many, including Sen. H. Darrel Darby, D-Cabell, and Mrs. W. W. Withrow, 18th District (Raleigh County) Delegate from Beckley, the Subcommittee Co-Chairmen, the "show is on the road."

Dr. Howard B. Sauder Assumes Heart Assn. Presidency

Mrs. Wendel Fultz, R. N., Chairman of the Board of the American Heart Association, West Virginia Affiliate, has announced that with the leaving of Dr. George Khoury of Morgantown, President of the Association, Dr. Howard B. Sauder, President-Elect, a practicing cardiologist from Wheeling, has assumed the duties as President.

Howard B. Sauder, M. D.

Doctor Khoury has left West Virginia to assume private practice in Wichita, Kansas.

Doctor Sauder has served as President of the local Wheeling Heart Division two times and has served on numerous state heart association committees. He is a graduate of the Virginia Military Institute, and received his M. D. degree from Western Reserve University.

Continuing Education Activities

Here are the continuing medical education activities listed primarily by the West Virginia University School of Medicine for part of 1976, as compiled by Dr. N. LeRoy Lapp, Assistant Dean for Continuing Education. The schedule is presented as a convenience for physicians in planning their continuing education program. (Other national, state and district medical meetings are listed in the *Medical Meetings* Department of *The Journal.*)

The program is tentative and subject to change. It also should be noted that weekly conferences are held on both the Morgantown and Charleston campuses. Further information about these may be obtained from: Division of Continuing Education, WVU Medical Center, P. O. Box 2867, Charleston 25330; or, Office of Continuing Medical Education, WVU Medical Center, Morgantown 26506.

(1976)

Mar. 6	Internal Medicine Teaching Day	Morgantown
Mar. 26	Third Annual Newborn Day	Charleston
Apr. 1, 2, 3	Cancer Teaching Day	Morgantown
Apr. 23, 24	Lipids Related to Atherosclerosis—Department of Pathology	Morgantown
Apr. 28, 29, 30-May 1	Department of Surgery and West Virginia Chapter of American College of Surgeons	White Sulphur Springs
Apr. 30-May 1	Seminar on Blood Banking	Morgantown

Physicians Elected To MU Medical School Advisory Committee

Three Huntington physicians recently were elected as representatives to the newly-organized Marshall University Medical School Advisory Committee at its initial meeting. They are Drs. Charles E. Turner, Winfield C. John and Thomas J. Holbrook.

Permanent members of the committee will include directors and chiefs of staff of Huntington hospitals. Officers of the committee are Dr. Rowland H. Burns, Chairman of the Medical Liaison Committee at St. Mary's Hospital, President; Carlton Smith, Administrator of the Huntington Veterans Administration Hospital, Vice President; and Dr. J. Evan Sadler, Chairman of the Medical Liaison Committee at Cabell Huntington Hospital, Secretary. Marshall President Robert B. Hayes is an ex-officio member.

Legislative Matters Dominate Council Discussions

Pending state legislation dominated the winter meeting of the West Virginia State Medical Association's Council held on Sunday, January 11, in Charleston.

In other action, however, the Council:

—Approved a $405,000 operating budget for 1976 after being informed by Dr. Kenneth G. MacDonald, the Treasurer, that the Association closed out its 1975 fiscal year with a $47,000 operating balance.

—Approved employment by the Association of a consultant "as needed" to assist in legislative and related matters.

—Approved honorary membership for four retired physicians—Drs. John E. Echols of Richwood, R. R. Summers of Charleston, Rupert W. Powell of Fairmont and John William Marsh of Wheeling—who have been accorded similar status by their respective component societies.

—Declined to express support for a West Virginia Board of Education resolution prohibiting sale in public school of candy, chewing gum, soft drinks and flavored ice bars effective with the 1976-77 term; and recommended, instead, more intensive overall health education programs in schools.

—Endorsed an application by the Region II Health Planning Association, Inc., with offices in Huntington, for assignment by the National Health Service Corps of two psychiatrists to serve the Logan-Mingo Area Mental Health, Inc., program. The Council made the endorsement contingent, however, upon receipt by the Medical Association's State Office of similar letters of endorsement from the Logan and Mingo Medical Societies.

HSA, Institute Progress

The Council heard reports from Drs. Jack Leckie, of Huntington, the Association President, and J. L. Mangus of Charleston, a member of Council, on initial steps toward development of a Health Systems Agency application for West Virginia under provisions of the 1974 Health Planning and Resources Development Act. Doctors Leckie and Mangus are members of the initial HSA Board.

Dr. Harry S. Weeks, Jr., of Wheeling, President of the West Virginia Medical Institute, Inc., told Council that the Institute, in its role as the Professional Standards Review Organization (PSRO) for West Virginia, had delegated professional review authority to 14 hospitals in the state as of January 11.

Doctor Weeks added that the Institute hoped to open two field offices, probably in the Beckley and Morgantown areas, within 60 days in further implementation of the PSRO activity.

In his report to Council, Mr. Charles R. Lewis, the Association's Executive Secretary, said that:

—The initial area claims review panels, four in number, had been appointed under the loss control

and education component of the Medical Association's group professional liability insurance program with Aetna Life and Casualty, with actual case reviews expected to begin by early February.

—Medical Association membership stood at 1,730 as of December 31, with the 1976 roster of members scheduled to be ready for distribution to the entire membership by the end of January.

—Except for a keynote, or Thomas L. Harris, speaker, the scientific program for the Association's 109th Annual Meeting August 18-21 at The Greenbrier in White Sulphur Springs has been completed.

—Further contact with the United Mine Workers of America Health and Retirement Funds indicated that information sought by the Association relative to UMWA Funds policy covering participation of physicians in care of its beneficiaries would be available early in 1976 after review and revision by the UMWA of such policy.

Abortion Bill Explanation

In the discussion of bills pending or anticipated in the 1976 session of the State Legislature which began in Charleston January 14, Dr. Charles E. Merritt of Beckley, Co-Chairman of the Legislative Committee, said the Association prepared an abortion proposal for introduction "for a specific reason."

The bill, encompassing American College of Obstetrics and Gynecology recommendations for the protection of the payment, was fashioned as a step, Doctor Merritt said, toward assuring that any procedures which new legislation might authorize be done by "qualified people in qualified institutions with proper facilities and equipment."

Dr. George R. Callender, Jr., of Charleston reviewed work done on behalf of the Council and Legislative Committee with regard to a radiologic technologist licensing bill set for re-introduction this year after suffering a veto by the Governor in 1975.

Doctor Callender said the Association will seek a certification rather than a licensure approach; a "pure" grandfather clause covering currently employed technologists, or an exclusion for doctors' offices; and possibly language bringing within the scope of the bill dentists and all other professions using such procedures as x-rays.

With regard to a pending bill to provide for licensure of physical therapists' assistants, Association recommendations included certification rather than licensure; a certification process similar to that in the physician's assistant legislation; continued prescription by a physician for physical therapy services; and exclusion, from the "physical therapy" definition, of electromyography or nerve conduction studies except under supervision of a competent physician electromyographer.

The Medical Association also was pledged to support an expanded advisory board of physicians for the Crippled Children's Services program; continuation of the program under the Department of Welfare; and specific provisions for participation of all qualified physicians.

Definition of Podiatry

After the longest single bit of discussion of the day, the Council favored the following definition of podiatry—that of the American Podiatry Association—as the Association position in relation to a podiatric licensing statute which has been a matter of controversy in the Legislature for the past three years:

"Podiatry shall be that branch of the medical arts which deals with the examination; diagnosis; treatment, and prevention of diseases and disorders of, the human foot by medical, surgical, mechanical and/or physical means."

The Council action also recommended language to the effect that "a person licensed to practice podiatry may use only local anesthesia."

Other legislative proposals supported by the Association included:

—The addition, in a statute enacted last year, of immunity from civil liability for a health care peer review organization itself, as well as for members and officers of such an organization.

—A broadening of language in proposed new physician's assistant legislation to permit use by a sponsoring physician of such an assistant in hospitals or other facilities in which the physician is the primary responsible attending physician, as well as in the physician's office itself.

Others attending the January 11 meeting were Dr. William E. Gilmore of Parkersburg, Council Chairman who presided; Dr. John J. Mahood of Bluefield, President Elect; Dr. Joseph A. Smith of Dunbar, Vice President; Dr. Worthy W. McKinney of Beckley, Councilor at Large; and these Councilors: Drs. Robert J. Nottingham of Morgantown; Ray M. Kessel of Logan; L. Walter Fix of Martinsburg; Robert D. Hess of Bridgeport; Louis W. Groves, Jr., of Richwood; Lyle D. Vincent of Parkersburg; Harold N. Kagan of Huntington; W. Alva Deardorff of Charleston; and Walter E. Klingensmith of Beckley; and Mr. Custer B. Holliday of Charleston, Executive Assistant, and Mrs. Mary W. Hamilton, South Charleston, Administrative Assistant, Association staff members.

Doctor Gilmore Top Blood Donor In Parkersburg

Dr. William E. Gilmore of Parkersburg recently received a seven-gallon donor award to carry away top honors for the Red Cross Bloodmobile operation at the First United Presbyterian Church there. Doctor Gilmore is Chairman of the State Medical Association's Council.

Public Health Trust Scholarship Program Being Formalized

The Attorney General of West Virginia Public Health Trust currently is announcing the formalization of its program of granting scholarships to students who are willing to practice their health-related professions within West Virginia. The Trust now has established a permanent office in Charleston with a telephone for inquiries and information.

In 1970, the attorney general of all 50 states brought a large class action antitrust suit against certain drug manufacturers. An out-of-court settlement was reached and West Virginia's share of the settlement amounted to more than $300,000. West Virginia Attorney General Chauncey H. Browning sought and obtained court approval to establish a charitable trust with the overall goal of obtaining better health care in the State.

In 1973, this trust was established under court supervision and for the past two academic years has been aiding students who are studying in professions related to the physical health, mental health, and well-being of the citizens of West Virginia. Shortly after its inception, the Trust was granted full public foundation status, to which tax deductible contributions may be made, by the Internal Revenue Service.

The Charleston National Bank serves as trustee for the Trust. The general supervision of the Trust, including solicitation of funds and distribution of awards and scholarships, rests with the Trust Advisory Board, whose members include the attorney general of West Virginia, president of the State Medical Association (represented by Dr. Marshall J. Carper of Charleston), president of the West Virginia Nurses' Association, director of the West Virginia Department of Health, director of the West Virginia Department of Mental Health, the chancellor of the West Virginia Board of Regents, the president of the West Virginia Association of Colleges and Universities; and the president of the Charleston National Bank.

Specifically, the Trust can expend funds for the establishment of medical scholarships in West Virginia medical schools, establishment of scholarships in nursing and public health; and for grants to finance research in the field of drug addiction, grants to public institutions dedicated to the care and treatment of narcotic addicts, and grants for public health research, education and care.

The Trust already has awarded more than 20 scholarships, and all recipients have obligated themselves to practice in West Virginia. All applications now are being received on a standard application form. Additional information may be obtained by contacting the Attorney General of West Virginia Public Health Trust, P. O. Box 846, Charleston 25323 (telephone (304) 346-1438).

Three-Day 'Trauma' Course Offered In March By Johns Hopkins

A three-day course on "Trauma" will be held March 17-19 at the Johns Hopkins University School of Medicine in Baltimore. The curriculum will stress treatment of life-threatening injuries as well as medical emergencies. It will encompass all of the surgical and many of the medical specialties utilized in handling the problems seen in the emergency rooms of various types of hospitals. The morning sessions will be available for physicians, nurses and other allied health personnel. In the afternoon, separate workshops will be available for the physicians, nurses and other allied health personnel.

The sponsors will be the Department of Surgery of The Johns Hopkins University School of Medicine, the Maryland Chapter of the American College

Two national presidents and officers of the State Medical Association are shown together in this photo taken by The Journal. From left, are Drs. Jack Leckie, Huntington, President of the State Medical Association; John J. Mahood, Bluefield, President Elect; Joseph A. Smith, Dunbar, Vice President; Kenneth G. MacDonald, Charleston, Treasurer; Carl B. Hall, Charleston, President of the American Academy of Family Physicians, and Max H. Parrott, President of the American Medical Association.

of Surgeons and the ACS Maryland Commission on Trauma; in cooperation with the Departments of Medicine and Nursing of Johns Hopkins, with the assistance of the University of Maryland School of Medicine.

This course is approved for 24 credit hours in Category 1 towards the Physician's Recognition Award of the American Medical Association. The Johns Hopkins University will award 2.4 Continuing Education Units for nurses participating in the entire symposium.

For additional information contact Janet B. Hardy, M. D., Director, Continuing Education, The Johns Hopkins University School of Medicine, 720 Rutland Avenue, Baltimore, Maryland 21205.

Seminar On Depression Scheduled March 5-6 In Charleston

The First Annual Conference of the West Virginia Mental Health Foundation, featuring a seminar on "Update on Depression," will be held March 5-6 in Charleston at the Daniel Boone Hotel.

The conference will be co-sponsored by the West Virginia District Branch of the American Psychiatric Association; the Department of Behavioral Medicine, West Virginia University School of Medicine; and the State affiliate of the National Association for Mental Health.

The conference will begin with a banquet at 7:30 P. M. on Friday, March 5, followed by educational meetings throughout the day on Saturday. Subjects to be presented will include pharmacological treatment, rapid psychotherapy, suicide, genetic factors, biochemical clues to depression, etiology, and sources of help for the clinician.

Some 500 physicians and allied health personnel are expected to attend. There will be a registration fee of $45, which includes the cost of the banquet. A reduced fee of $25 will be available to residents, interns and allied health personnel. For further information, contact the West Virginia Mental Health Foundation, Box 5303, Capitol Station, Charleston 25311 (telephone (304) 348-3211).

Sale Of 'Today's Health,' AMA Magazine, Announced

The American Medical Association recently announced the sale of *Today's Health,* its 52-year-old monthly consumer magazine, to Hospital Media, Inc. of Nashville, Tennessee.

Hospital Media was formed in May of last year by Frederic Gregg, Jr., President, and 11 other Nashville residents, four of them physicians. The new publisher will continue subscription sales to the public and to physicians for reception room display. Advertising will be continued.

Today's Health, originally published by the AMA as *Hygeia,* has a current paid circulation of approximately 300,000 with an additional 165,000 unpaid subscriptions going to AMA members for display in physician reception rooms.

In announcing the sale, the AMA's Executive Vice President, James H. Sammons, M. D., said, "Because of rising costs and increasing competition we have had to take a hard look at our whole publication mix. We expect this re-examination process will result in our doing fewer things but doing them better. By selling *Today's Health* to an organization equally interested in public health, we can concentrate on improving publications aimed at a physician audience."

Renal Symposium To Be Held In South Charleston

A "Renal Symposium" will be sponsored by the Charleston Division of the West Virginia University Medical Center and the Charleston Area Medical Center on March 12 and 13 at the Ramada Inn in South Charleston.

Registration will begin at 8 A. M. on Friday, March 12, followed by a welcome by Dr. Hartwell G. Thompson, Dean of the Charleston Division of the WVU Medical Center; and an introduction to the symposium by Dr. Mary Lou Lewis, Chief of Nephrology, Charleston Division, WVU Medical Center, conference chairperson.

The faculty will include Doctor Lewis; David A. Clayman, Ph. D., Assistant Professor, Behavioral Medicine, Charleston Division, WVU; Neil Kurtzman, M. D., Professor of Medicine and Chief, Section of Nephrology, University of Illinois; James W. Lane, Clinical Associate Professor of Urology, Charleston Division, WVU;

Helen Lodge, R. D., Director of Dietetics and Food Services, CAMC; A. Thomas McCoy, M. D., Clinical Associate Professor of Urology, Charleston Division, WVU; Jack Metcoff, M. D., Professor of Pediatrics and pediatric nephrologist, University of Oklahoma Medical Center; Alfred K. Pfister, M. D., Clinical Associate Professor of Medicine, Charleston Division, WVU; Wadi N. Suki, M. D., Professor of Medicine and Chief, Renal Section, Baylor College of Medicine; and Doctor Thompson.

The conference is approved for 9.5 hours of Category 1 credit toward the AMA Physician's Recognition Award. Credit from the American Academy of Family Physicians has been requested.

Changes In Medical Education Documented By AMA

A "quiet revolution" has taken place in American medical education, according to Max H. Parrott, M. D., President of the American Medical Association.

Commenting on the publication of the 75th annual special "education number" of the Journal of the American Medical Association (JAMA), Doctor Parrott said: "The quiet revolution that has occurred in our medical education system, to meet the changing demands of American society, has come about with very little fanfare and none of the attendant disruptions which would be part of any governmental programs designed to bring about these changes. Because the changes were voluntary and evolutionary there is every reason to believe that they will continue and that they will have a lasting impact on our medical delivery system."

Some of the trends and shifts detailed in the special issue of JAMA, dated December 29, include:

- AMA goal of more first-line physicians attained early—58 per cent of all new M. D.'s now are entering primary care residencies.
- Record number of first year medical students—there has been a 69-per cent increase in the past 10 years.
- Number of medical schools has increased by 27.
- Record enrollment of women—up 360 per cent in four years.

New Emphasis on Primary Care: It is generally accepted that if there is a physician shortage in the U. S., it is a matter of maldistribution by specialty. This concentration on narrow specialties drew away from the number of primary care physicians. It has also been shown that physicians trained in family practice have a greater tendency to settle in rural areas. Thus the specialty imbalance also helped exaggerate the shortage of physicians in rural areas.

The former emphasis on the specialties which were removed from primary care has now been reversed. The JAMA survey reveals that more newly-graduated physicians are entering the primary care specialties—Family Practice, General Practice, Pediatrics, Obstetrics and Gynecology and Internal Medicine—than ever before, confirming a trend which had been identified several years earlier.

In 1973, the AMA stated as "desirable" than an ideal goal would be 50 per cent of all new M.D.'s entering primary care residency programs. That goal has been reached and surpassed.

By 1974, 58 per cent of all newly graduate medical students were entering primary care residencies.

Further evidence of this interest in primary care: of the 114 medical schools in the country, 96 now report a teaching program in family medicine. Two years ago, only 49 schools had such programs.

Increase in Medical Students: Each year the number of first-year medical students gets larger.

In the 1974-1975 class there was an increase of 3,188 entering American medical students over the preceding year. The total number of first-year students in 1975-1976 is 14,963.

OFFICERS OF COMPONENT SOCIETIES

Society	President		Secretary		Meetings
Boone	Manuel T. Uy	Madison	Harold H. Howell	Madison	3rd Wed.
Brooke	Ragelio L. Velarde	Follansbee	James E. Wise	Follansbee	
Cabell	Robert L. Dunworth	Huntington	Colin M. Craythorne	Huntington	2nd Thurs.
Central West Virginia	Charles T. Lively	Weston	Joseph B. Reed	Buckhannon	As Sched.
Eastern Panhandle	Norman Samuels	Martinsburg	Wm. O. Pischnotte	Martinsburg	2nd Wed.
Fayette	Carl R. Adkins	Fayetteville	Chuan H. Lee	Montgomery	1st Wed.
Greenbrier Valley	Harold P. Dinsmore	Ronceverte	Romeo R. Ednacot	Ronceverte	2nd Wed.
Hancock	George S. Kosar	Weirton	Carlos L. Vasquez	Weirton	3rd Tues.
Harrison	Charles S. Harrison	Clarksburg	W. E. Williamson, Jr.	Clarksburg	1st Thurs.
Kanawha	Joseph T. Skaggs	Charleston	Jean P. Cavender	Charleston	2nd Tues.
Logan	Enrico V. Rallos	Man	Leandro Galang	Logan	2nd Wed.
Marion	Lawrence A. Williams	Fairmont	Q. A. Melgarejo	Fairmont	Last Tues.
Marshall	Andrew J. Barger	Glen Dale	Michail Dalgovskij	Glen Dale	1st Tues.
Mason	Mark Cheng	Pt. Pleasant	Ismael O. Jamora	Pt. Pleasant	4th Tues.
McDowell	Joseph C. Ray	Welch	Arthur Allen Carr	Welch	2nd Wed.
Mercer	T. Keith Edwards	Bluefield	David F. Bell, Jr.	Bluefield	3rd Mon.
Minga	Edward B. Headley	Williamson	Duane A. Schram	Williamson	2nd Wed.
Monongalia	R. J. Nottingham	Morgantown	Barbara Jones	Morgantown	1st Tues.
Ohio	Donald H. Hofreuter	Wheeling	Francis J. Gaydosh	Wheeling	4th Tues.
Parkersburg Academy	George Gevas	Parkersburg	Alfonso Morales	Parkersburg	1st Thurs.
Potomac Valley	Robert E. Roberts	Petersburg	D. F. Bensenhaver	Petersburg	2nd Wed.
Preston	James V. Gainer, Jr.	Kingwood	C. Y. Moser	Kingwood	4th Thurs.
Raleigh	Stephen T. J. Lee	Beckley	Kwan H. Lee	Beckley	3rd Thurs.
Summers	Buford W. McNeer	Hinton	E. L. Jimenez	Hinton	3rd Mon.
Tygart's Valley	Gene W. Harlow	Grafton	A. Kyle Bush	Philippi	3rd Thurs.
Wetzel	Lemayne Coffield	New Martinsville	Chas. P. Watson	New Martinsville	Monthly
Wyoming	Frank J. Zsoldos	Mullens	George F. Fordham	Mullens	Quarterly

Look For Readership Survey Form In This Issue

What do you think of your *Medical Journal*? You now have a chance to tell us—the editors and the staff.

We have prepared "A Readership Survey" form, appearing as an insert in this issue, which will permit you to say what you do or do not like; and what we might do to improve *The Journal*. Only a few minutes actually will be needed to answer the questions presented, but we hope you'll take as long as you feel necessary to give us a really helpful response.

The survey form has been designed as a tear-out, and can be folded into an envelope and sealed. The postage is paid. What could be easier!

Much time and effort go into each and every edition of *The Journal*. Our goal is simply stated —to give you a publication with quality and content—in scientific articles, general news and other material—that is informative, interesting and of personal benefit to you.

Won't you let us know how well we are achieving our goal? After all, this whole project has YOUR interest as the top priority!

State Medical Assn. Announces 'Alaskan Adventure' Tour

The State Medical Association is announcing a nine-day holiday tour, the Alaskan Adventure Air-Sea Cruise, which will depart by air from Pittsburgh on July 19 and return on July 27.

The tour, planned by INTRAV, is being offered to members of the State Medical Association and their families. The cost, which includes round-trip air fare, shipboard accommodations and meals, will begin at $1198, depending on stateroom category selected.

A comprehensive continuing education medical seminar will be conducted aboard ship during the cruise. Subject matter will include problems of medical and dental care in rural areas; how to protect your medical license; prevalence of uterine cancer; general practice in a small bush community; diabetes and metabolic problems as influenced by climate; professional incorporation; viral infections and appropriate therapy; treatment of surgical emergencies, and plastic and reconstructive surgery.

Those on the tour will fly to Vancouver, British Columbia, where they will board the Princess Cruise Line's "Island Princess" for a voyage through Alaska's "Inside Passage," up the coast of British Columbia and the Alaska Panhandle. Ports visited will include Ketchikan, Juneau, Skagway, Glacier Bay National Monument, Sitka and Vancouver.

For reservations and additional information, contact the West Virginia State Medical Association, P. O. Box 1031, Charleston 25324.

Medical Meetings

The following is a partial list of national, state and district medical meetings scheduled in the coming months.

1976

Feb. 8-12—Southeastern Surgical Congress, New Orleans.

Feb. 23-26—Am. College of Cardiology, New Orleans.

Feb. 27-29—AMA Regional Meeting, Denver.

March 3-6—Neurosurgical Soc. of Am., Marco Island, Fla.

March 5-10—Am. Acad. of Allergy, San Juan, P. R.

March 17-20—AMA Regional Meeting, Lexington, Ky.

March 29-April 2—Am. College of Radiology, Washington, D. C.

April 1-2—W. Va. Chap., Am. Acad. of Pediatrics, Beckley.

April 5-8—Am. College of Physicians, Philadelphia.

April 9-11—W. Va. Chapter, AAFP, Charleston.

April 10-12—AMA-AMPAC Workshop, Washington, D. C.

April 25-28—W. Va. Academy of Ophth. & Otol., White Sulphur Springs.

April 26-29—Am. College of Surgeons, Boston.

April 28-30—Medical & Chirurgical Faculty of the State of Md.

April 28-May 1—W. Va. Chapter, ACS, White Sulphur Springs.

April 29-May 2—ASIM, Atlanta.

May 1-2—W. Va. Assn. of Pathologists, Morgantown.

May 9-12—Am. Assn. of Plastic Surgeons, Atlanta.

May 10-13—Am. College of Obstetricians & Gynecologists, Dallas.

May 14-17—Am. Ophthalmological Soc., Kamuela, Hawaii.

May 22-27—Am. Gostroenterological Assn., Miami Beach, Fla.

May 25-29—Am. Gynecological Soc., Hot Springs, Va.

May 27-29—Am. Cancer Society, National Conf. on Radiation Oncology, San Francisco.

June 14-16—Am. Neurological Assn., San Francisco.

June 19—W. Va. State Society of Anesthesiologists, Morgantown.

June 26-July 1—AMA Annual Meeting, Dallas.

Aug. 18-21—109th Annual Meeting, W. Va. State Medical Assn., White Sulphur Springs.

The West Virginia Medical Journal

Vol. 72, No. 3 March, 1976

Special Article

The Medical Examiner System: A New Concept In Community Medicine For The State Of West Virginia

Irvin M. Sopher, D. D. S., M. D.

". . . What better way to assess a society than to know how many of its children are dying at home without medical attention, how many of its mothers are dying from septic abortions, and how many of its fathers are dying at work in hazardous environments? Forensic pathology, then, is the study of the ecology and the nature of human death. It is the study of public deaths, and those of concern to the public at large. It is meant to aid the living. . . ."[1]

Historical Background

Twelve years ago, in order to improve the medicolegal investigation of death, the Legislature passed the Medical Examiner Law of the State of West Virginia (West Virginia Code, Sections 61-12-1 through 61-12-15). Despite passage of this law in 1963, insufficient funding of the statute necessitated continuation of the existing coroner system. In late 1974, Governor Arch A. Moore, Jr., upon the encouragement of interested citizens, the West Virginia State Medical Association and law enforcement officials, re-activated the Commission on Postmortem Examinations. The responsibility of this Commission, the regulatory body of the medical examiner law, is to create basic guidelines for a statewide medical examiner structure and to select a chief medical examiner to expedite and organize the medical examiner system under the aegis of the law. The preliminary funding of the medical examiner program has been greatly assisted by the Governor's Committee on Crime, Delinquency and Corrections as federally funded through Law Enforcement Assistance Administration monies.

The Author

- **Irvin M. Sopher, D. D. S., M. D., Chief Medical Examiner, State of West Virginia; and Clinical Professor of Pathology, West Virginia University School of Medicine, Morgantown.**

In August, 1975, upon recommendation by the Commission, the author was appointed by the Governor to the position of Chief Medical Examiner for the State of West Virginia.

Medical Examiner Legislation

Prior to consideration of specifics regarding the law governing a medical examiner system, it is necessary to introduce the concept of *private* death versus *public* death. Such a dual categorization of the mode of death serves as the legal foundation upon which medical examiner legislation is based. A *private* death is one wherein the death results solely from natural disease processes, usually in the home or hospital setting, and which can be so certified by an attending physician who has knowledge regarding the past or current medical history of the deceased, as well as the circumstances surrounding death. The latter are necessary prerequisites regarding an attending physician's ability (professionally and legally) to certify a death, within the realm of reasonable medical certainty, as due to a natural disease process. Legal certification of death refers to the assignment of cause of death and manner of death upon a death certificate bearing the name of the deceased. Such deaths possess no further medicolegal significance; do not in-

volve the interests of public health, welfare and safety and are strictly a private matter between the family of the deceased and the certifying physician. Deaths so considered as private deaths must result solely from natural disease. Such deaths represent, by far, the majority of total community deaths. Any postmortem examination of such a death requires consent of next-of-kin.

In contrast, a *public* death is one wherein the death bears a relationship to the community-at-large regarding public health, welfare and safety, inclusive of subsequent legal issues inherent to the death. The designation "public" in this context, of course, includes next-of-kin. Approximately 20 to 25 per cent of all community deaths can be expected to fall within the category of *public* death. In recognition of the fact that a significant number (one in every four to five) of total community deaths represent issues of overt or covert importance to next-of-kin or the community, it is rather logical that legislation has developed through our social evolution to expedite the proper investigation of such public deaths. Such legislation, known as a medical examiner law, therefore specifically encompasses certain types of death in order to best serve the interest of the citizenry as well as the legal functions of our social order. A medical examiner law establishes legal jurisdiction regarding certain specified circumstances of death; and, further, creates a governmental agency to expedite the medical investigation of cases that fall within the law. The investigative agency established by the law is the medical examiner's office and this office, operating within the framework of a medical examiner law, comprises the medical examiner system. Any deaths falling within the scope of the medical examiner law become the jurisdiction of the medical examiner and family autopsy permission is not necessary if such an examination is required to establish cause and/or manner of death, or to recover medicolegal evidence germane to the case.

In a general sense, a medical examiner law concerns ALL deaths that result from accident, suicide and homicide in addition to deaths as a result of apparent natural causes, but without the presence of a physician to certify that the death was, in fact, due to natural disease. In deaths due to natural causes wherein the deceased was attended by a physician, the attending physician can so ascertain the manner of death as *natural* and the case would not fall within the realm of the medical examiner law. The term "attended by a physician" does not necessarily imply physical presence of the physician at the time of death, but refers to medical knowledge concerning the deceased which, in consideration of the circumstances of death, enables him to certify the death as due to natural disease. The responsibility of certification of death in such cases is carried by the attending medical practitioner.

Deaths directly or indirectly related to accident, homicide, suicide or occurring under suspicious circumstances are medical examiner cases by law and cannot be certified under any circumstances by an attending physician. Such cases must be reported to the medical examiner. In addition, deaths occurring while in police custody or as a result of therapeutic misadventure also are included within the jurisdiction of the medical examiner.

In essence, a medical examiner law insures that all deaths within the jurisdiction are certified by a physician, the person best qualified to evaluate and thus legally certify cause and manner of death. An undertaker should not remove a body from a hospital or scene of death without a physician-signed death certificate, or without the permission of an attending physician or medical examiner who will subsequently issue the certificate.

The Medical Examiner's Act of the State of Florida[2] portrays the actual wording of cases to be investigated in that jurisdiction by the medical examiner:

> "When in the State of Florida any person shall die (a) of criminal violence, (b) by accident, (c) by suicide, (d) suddenly when in apparent good health, (e) when unattended by a practicing physician, or other recognized practitioner, (f) in any prison or penal institution, (g) when in police custody, (h) in any suspicious or unusual circumstance, (i) by criminal abortion, (j) by disease or injury or toxic agent resulting from employment, (m) when a dead body is brought into the State of Florida without proper medical certification, or (n) when a body is to be cremated, dissected or buried at sea, the medical examiner of the district in which the death occurred or the body was found shall determine the cause of death and shall make or have performed such examinations, investigations and autopsies as he shall deem necessary or as shall be requested by the state attorney or county solicitor. The medical examiner shall have the authority in any case coming under any of the above categories to perform or have performed whatever autopsies or laboratory examinations that he deems necessary in the public interest."

The Florida Medical Examiner's Act embodies the general prinicples set forth in most medical examiner systems operating in this country. The West Virginia Medical Examiner Law, although not as explicitly stated, provides essentially the same concepts and coverage as noted in the Florida law. The medical examiner law empowers the medical examiner to carry out an investigation, including autopsies, as deemed

necessary in the public interest. These laws are enacted to insure the future well being, health and safety of the population, as well as to enforce the scientific pursuit of truth and justice.

The Medical Examiner System; Forensic Pathology

In addition to creating the legal background upon which the medical examiner system is based, a medical examiner law further specifies the format of the system to include local practicing physician medical examiners (county medical examiners) as primary investigators of deaths falling within the law, and the utilization of pathology subspecialists, namely, forensic pathologists (chief and assistant medical examiners), with the latter serving as the backbone of the system.

The specialty of forensic pathology represents a contribution of the medical profession to a vast arena of applied science known as "forensic science." The word *forensic* is etymologically derived from the Latin *forum* implying "suitable to courts of justice"; hence, "forensic" is equated with "legal." Forensic science, defined as an organized body of scientific knowledge or technology and its subsequent application to forensic (or legal) matters, encompasses a spectrum which ranges from trace evidence analysis concerned with particulate evidence as retrieved from the scene of a crime or felony to forensic pathology which concerns itself with the dead body and its relationship to any subsequent situation. Several areas of study included in the forensic sciences represent the fields of missile ballistics, tool mark comparison, analysis of questioned documents, fingerprint identification, serologic analysis of body fluids, toxicology, metallurgy, and criminology. In addition to forensic pathology, particular areas within the forensic science spectrum which directly relate to the human subject include the fields of forensic psychiatry, forensic anthropology and forensic dentistry. The forensic sciences are charged with the responsibility of the scientific evaluation of evidence and the relationship of such evidence to the legal frame of reference pertaining to the case at hand. It is obvious that forensic science ramifies into many independent spheres of the scientific arena, each commonly bound by their dedication to the establishment of truth.

Forensic pathology is a recognized subspecialty by the American Board of Pathology. Eligibility to the specialty requires at least one year of specialized forensic pathology training superimposed upon the previous residency requirements for accreditation in anatomic and/or clinical pathology. There are currently 19 centers certified by the American Medical Association Committee on Internships and Residencies as forensic pathology training programs. Such specialized training primarily centers upon the recognition and interpretation of physical and chemical bodily injury, inclusive of toxicology, as well as the relationship of natural disease and/or injury to the death of the individual. Scene of death evaluation and courtroom experience also comprise important aspects of this training. There are approximately 100 Board-certified forensic pathologists in this country actively engaged in full-time practice of the specialty. The representative professional societies of the specialty include the Pathology-Biology Section of the American Academy of Forensic Sciences and the National Association of Medical Examiners.

Forensic pathology is principally concerned with the application of the science of medicine to the field of law. More specifically, the forensic pathologist deals primarily with the cause and manner of death of cases falling within his legal domain, a domain established by the local city, county or state legislation formulated to handle the medicolegal aspects of certain deaths as specified by the existing medical examiner law.

The objective, techniques and interpretation of the medicolegal autopsy differ considerably from the routine autopsy. The goal of the medicolegal autopsy is the establishment not only of the cause but the manner of death, the interpretation of this data in relationship to the circumstances of death and to the community, and the application of the results of the postmortem examination to assist in the disposition of any subsequent legal issues arising from the death. Areas of interest peculiar to forensic pathology include the identification of unknown remains, estimation of the postmortem interval, and toxicology.

Cause and Manner of Death

Those concerned with the legal aspects of death must be familiar with the concept of cause and manner of death. The issues of cause and manner of death are of paramount importance to forensic pathology. The terms *cause of death* and *manner of death* are especially confusing to many persons, including physicians, and are often incorrectly regarded as synonymous. The *cause of death* pertains to the pathologic entity directly responsible for death (e.g. arteriosclerotic cardiovascular disease, cancer of the lung, multiple injuries, gunshot wound of the heart, conflagration). The term represents the disease or injury considered responsible for death. The *manner of death* is a medicolegal classification based upon

the postmortem findings AND the circumstances surrounding the death. It represents the manner in which the cause of death transpired. The classification of manner of death includes five categories:

(1) Natural—death occurring from natural disease processes, such as heart disease, cancer, pneumonia, etc.; (2) Accident—death as a result of household, vehicular, occupational, or other accidental injuries; (3) Suicide—the voluntary or intentional taking of one's own life; (4) Homicide—death resulting from the purposeful or negligent actions of another person; and (5) Undetermined—a category comprising a small percentage of cases wherein the manner of death cannot be ascecrtained despite thorough naked-eye, microscopic and toxicologic analyses of the tissues as well as a complete investigation of the circumstances surrounding death. In other instances, the cause of death may be known; however, the manner of death may be undetermined.

The interrelationship of the terms *cause of death* and *manner of death* are illustrated in the following examples:

1. A 48-year-old man is found dead in bed with a gunshot wound of the head. Upon completion of the postmortem examination, the pathologist notes the cause of death to be a *close range* gunshot wound of the head. The manner of death can only be determined by a thorough investigation of the scene of death as well as the circumstances surrounding death. Is there evidence to suggest that the deceased took his own life (suicide)? Was the deceased shot by another person (homicide)? Does evidence support any possibility that the weapon discharged accidentally (accident)?

2. A body is discovered on the sidewalk adjacent to a six-story building. The cause of death is attributed to multiple injuries including a broken neck. The autopsy excludes any possibility that the death occurred as the result of a hit-and-run pedestrian accident, and furthermore, the injury pattern is indicative of a fall from an unusual height. The manner of death is dependent upon scene evidence indicating whether the deceased jumped (suicide), was intentionally pushed (homicide), or fell (accident) off the roof.

3. A 63-year-old man was involved in a minor vehicular traffic accident wherein he sustained no bodily injury. The subject became quite irate and excited over the accident and 30 minutes later complained of severe chest pain and fatally collapsed. Postmortem examination disclosed marked coronary arteriosclerosis as the cause of death. Although this cause of death represents a natural disease process, the accessory facts that (a) a period of sudden undue stress and excitement are known to precipitate a fatal heart attack, and (b) the fatal attack chronologically ensued shortly after the traffic accident, establish the manner of death as *accident*.

4. The autopsy examination on a woman who fatally collapsed during a purse-snatching disclosed marked coronary arteriosclerosis as the cause of death. Despite the extent of heart disease, the subject died as a direct result of the circumstances surrounding her death. The occurrence of death due to a natural disease process, but precipitated by a felony, results in the designation of the manner of death as *homicide*.

5. An elderly farmer falls to the floor while carrying a kerosene lantern into the barn. The subsequent conflagration engulfs the victim. Autopsy examination discloses a recent hypertensive cerebrovascular accident as well as extensive body burns. The absence of carbon monoxide (carboxyhemoglobin) in the blood or soot in the airway upon postmortem examination indicates that the victim had died prior to the onset of the fire. The medical facts in the case indicate that the deceased died of a natural disease process prior to the subsequent conflagration. Despite the initial suggestion that death was accidental, the autopsy disclosed that the cause of death was a stroke and the manner of death is designated as *natural*.

6. A 32-year-old male pedestrian received lower extremity fractures as a result of being struck by an automobile. Despite an apparent uncomplicated recuperative period, the patient suddenly expired during the fifth week of hospitalization. The postmortem examination discloses the cause of death as pulmonary embolism. This embolic phenomenon, a known complication of such an injury, indicates that death was related to the injury received five weeks earlier, and the manner of death is designated as *accident*.

Each of the above examples represents typical case material found within any medical examiner's office. The responsibility of the forensic pathologist is to certify the cause and manner of death based upon the data revealed by both the postmortem examination and the circumstances surrounding the death. Further, it is the duty of the forensic pathologist to present the scientific evidence regarding his findings in a court of law, if necessary.

The derivation of manner of death is important in that it serves as a guideline for other

parties interested in any particular death. Police personnel are initially concerned as to manner of death as this designation determines the subsequent course of their investigation. The prosecuting attorney's office is concerned with homicidal, accidental or suicidal deaths. Numerous industrial and government organizations may be interested in accidental deaths of various types in an effort to improve the man-environment relationship. Deaths classified as "natural" represent sources of data for local health agencies in their assessment of various epidemiologic aspects of disease.

The importance of a medical examiner system is appreciated when one realizes that in jurisdictions governed by a medical examiner law, approximately 25 per cent of all deaths occurring within the jurisdiction fall within the medical examiner statute. For the year 1972 in the State of Maryland, for example, the Office of the Chief Medical Examiner, State of Maryland, was responsible for certification of 7,372 of the 32,826 total deaths occurring within the State. Table 1 discloses the percentage distribution of the manner of death at that Office for the same year. These figures are representative of other medical examiner systems throughout the country.

In the mind of the layman, the forensic pathologist or medical examiner is primarily associated with homicide, and the connotation of *city morgue* with bizarre murder cases has been historically perpetuated through the years. In truth, however, such cases represent only about eight per cent of the total caseload of a medical examiner facility. While it is true that much notoriety is afforded the medical examiner due to the mass communication media which report such crimes, these cases represent but a small fragment of the total contribution by a medical examiner system to the community when one considers the total functions of such an agency.

TABLE 1

Manner of Death, Office of the Chief Medical Examiner State of Maryland, for the Year 1972*

	Number of Cases	*Per Cent of Total Cases*
Natural	4,497	60.9
Accident	1,768	23.9
Homicide	521	7.1
Suicide	473	6.4
Undetermined	113	1.5
Total	7,372	99.8

*From the Thirty-Fourth Annual Report, Office of the Chief Medical Examiner, State of Maryland.

The assignment of the correct manner of death in any case is of paramount significance to interested parties. Surviving family members may benefit from proven accidental deaths. Workmen's Compensation benefits may be applicable to other instances of natural or accidental deaths under certain circumstances. The analysis of injury patterns and cause of death in industrial, vehicular and aircraft accidents, when coupled with the scene investigation, can lead to improvement in design and safety regarding the man-machine relationship.

Similar investigation and evaluation of fatal home accidents also contribute to improving man's relationship with his environment. Common examples of the latter relate to deaths due to electrocution, fire and carbon monoxide poisoning. It must be emphasized that, in addition to the legal implications inherent to an accident case, the postmortem investigation of the accidental death is designed to reduce the morbidity or mortality (if not the prevention) of future similar accidents.

Within the sphere of natural deaths, which constitutes 60 to 70 per cent of a medical examiner office caseload, not only is the cause of death certified but disease patterns may be recognized which represent important contributions to the epidemiologic aspects of disease. Occupational and pollution-related diseases as well as unsuspected environmental poisons may so be identified and corrected. Previously undetected genetic and infectious diseases may also be documented which can lead to the institution of preventive health measures for surviving family members.

In the academic setting, a medical examiner system provides an important focus of medical research in the specialized areas of pathology, trauma, and toxicology. It also serves as a nidus for research activity in the various fields of forensic science, criminology, and public health.

The training and experience of the forensic pathologist is attuned and directed towards community medical and medicolegal problems as mentioned above. It is quite obvious that jurisdictions which operate without such a system are deprived of vital information pertinent to the surviving family, the community, the field of medicine, interested law enforcement agencies, and the judiciary system.

A common misconception regarding medical examiner systems is that these organizations represent an extension of the law enforcement

agencies. Such an impression is false. A medical examiner system, although dependent upon police investigation for an analysis of the circumstances surrounding death, is an autonomous agency. The findings of the forensic pathologist represent the ultimate effort in the search for truth regarding cause and manner of death, and further, the exploration of the relationship between the death and the community. An office of the medical examiner is a neutral scientific agency, free of political influence, established by law to gather and interpret the medical facts pertinent to the death in question. The act of death is a very legal issue in our modern society. The dead should be afforded a similar degree of medical attention as the living. Forensic pathology represents the antithesis to the statement, "Dead men don't talk." In truth, the dead may speak rather loudly; it is merely a matter of interpreting the language. It can truly be said that forensic pathology represents a realm "Where Death Delights."*

Medical Examiner Systems Vs. Coroner Systems In The United States

Despite the benefits that accrue to the population from the establishment of a medical examiner system, it has been estimated that, at most, only one-third to one-half of this nation's citizenry are protected by medical examiner laws.[3] In contrast, many states and/or large segments thereof still possess outmoded coroner systems. Many of these coroner jurisdictions are staffed by a non-physician coroner who is primarily responsible for the ultimate decision regarding cause and manner of death. In many instances, the coroner is an elected official whose primary occupation may be that of undertaker, pharmacist, lawyer, sheriff, or carpenter. It is rather obvious that such individuals, despite their intentions, cannot provide the expertise required for the settlement of the often complex medical and legal issues that arise from deaths occurring under their jurisdiction. Needless to say, the majority of such coroner agencies have proven totally inadequate of the assigned mission of protecting the public welfare and safety.

The article by Luke, Sturner and Petty[3] reveals some quite poignant statistics emphasizing the misclassification of cause and manner of death in areas under coroner jurisdiction. Only recently have the citizenry, law enforcement officials, the judiciary, and legislators become aware of the importance of the proper medicolegal investigation of community deaths. Such enlightenment has been fostered by several recent violent deaths of national importance (the Kennedy brothers and Martin Luther King assassinations, the Attica Prison riot deaths and the Los Angeles Symbionese Liberation Army House Fire). This delayed but rapidly developing appreciation of the importance of the field of forensic pathology has resulted in a recent expansion in the number of statewide or local medical examiner systems as well as revision of some existing coroner offices.

Other coroner jurisdictions possess a system controlled by a physician. The latter format represents a step in the right direction; however, the absence of forensic pathology expertise to direct and assist the operation frequently results in failure to meet the modern standards required for the competent medicolegal investigation of death. The optimal situation is the creation of a medical examiner system structured around the specialty of forensic pathology with physician medical examiners serving as the primary case investigators.

State of West Virginia Medical Examiner System

With the present funding of its medical examiner law, West Virginia becomes the twenty-first state in the country to possess a statewide medical examiner system. This system, when fully developed, will replace the current coroner system and will provide the citizens of West Virginia with a standardized centrally-controlled system for the medicolegal investigation of death in accordance with current standards applicable to medicine, law and forensic science.

The format of the system, projected to be fully operational by the summer of 1977, will be to establish local county medical examiners in each of the 55 counties of the State with central direction and support provided by the Office of the Chief Medical Examiner in Charleston. The county medical examiners will be derived from the pool of practicing physicians in each county who possess an interest in legal medicine and in serving their respective communities as county medical examiner(s). The only prerequisite for such a position is licensure to practice medicine in the State of West Virginia. The county medical examiner(s) will manifest complete authority over medical examiner cases in their jurisdiction as a representative of the chief medical examiner. The responsibility of the county medical examiner will be to investigate medical examiner cases within his jurisdiction and to arrive at a decision as to the possible need for subsequent medicolegal autopsy examination. If, in the opinion of the county medical examiner, the

*"Where Death Delights"—Autobiography of Milton Helpern, M. D., formerly Chief Medical Examiner, City of New York.

cause and manner of death can be ascertained within reasonable medical certainty based upon historical circumstances and superficial examination of the body, the county medical examiner is delegated with the authority of certifying the death without further examination. If, on the other hand, the investigating medical examiner cannot reasonably establish the cause and/or manner of death, or if suspicious circumstances exist, or if a subsequent medicolegal issue is apparent, then an autopsy examination is necessary to elucidate the facts. Such bodies will then be forwarded via a prearranged transport system utilizing ambulance and funeral director services to the designated regional autopsy facility serving that respective area of the State. A fee-for-service arrangement, commensurate with pay scales of other statewide medical examiner operations, is currently in progress for the county medical examiners. It is obvious that the county medical examiner occupies a very significant and responsible position within the overall structure of the system as he serves as the primary contact (by law enforcement, emergency room or hospital personnel) and investigator of medical examiner cases within his jurisdiction. In support of his function, the local practitioner county examiner will be assisted by guidelines issued from the central office as well as by 24-hour consultation telephone access to the central office. The investigatory process described above may sound complex; however, the interested physician should realize that such deductions are currently being drawn by layman coroners over most of our country although these persons are seriously compromised in their decision-making role by the absence of medical knowledge.

Those cases dispatched by the county medical examiner for subsequent autopsy examination will have such autopsies performed by designated pathologists, ultimately and optimally, forensic pathologists. The Office of the Chief Medical Examiner is currently under construction in Charleston and is scheduled for completion in late spring, 1976. This 10,000-square foot building will provide medicolegal autopsy facilities complete with incorporated x-ray and histologic services. An independent toxicology section of the office will serve this very vital aspect of medicolegal death investigation. The administrative and central records depository for the statewide operation will also be quartered at this site. Two forensic pathologists and two forensic toxicologists will serve as the professional staff of the office.

The central Charleston Office of the Chief Medical Examiner will perform all of the medicolegal autopsy examinations as dispatched from the counties of southern West Virginia. This facility will perform an estimated 70 per cent of all medical examiner autopsies performed in the State. Current efforts are directed at the organization of this region of the statewide operation. It is anticipated that in the summer of 1976 efforts to establish the northern and eastern panhandle regions will begin. The ultimate plan, in conjunction with the West Virginia University School of Medicine's Department of Pathology, is to establish a forensic pathologist at Morgantown, in order to serve the northern counties; and the positioning of a forensic-oriented pathologist in the eastern panhandle region to handle coverage of that area.

From a statistical standpoint, there are approximately 20,000 deaths from all causes annually in the state of West Virginia. Of these 20,000 deaths, it is projected that 4,000 of these deaths will represent medical examiner cases, and that a maximum of 1,800 of these cases will necessitate medicolegal autopsy examinations.

References

1. Corrigan, G. E.: Realm of Forensic Pathology. N.E.J.M. 279:48, 1968.
2. Davis, J. H., et al: Investigative Powers of the Medical Examiner in Light of Rupp versus Jackson. J. Forensic Science. 17:181, 1972.
3. Luke, J.; Sturner, W., and Petty, C: The Status of Forensic Pathology in the United States Today. Forensic Sciences Gazette. 1:3, 1970.

Acute Spinal Epidural Abscess

Charles R. Loar, M. D.; and Thomas R. Connelly, M. D.

ACUTE spinal epidural abscesses occur infrequently, but their delayed diagnosis and/or improper treatment carry such grave consequences that periodic review of the subject is warranted. Excellent surgical treatment has been available since the time of Walter Dandy,[2] but, even today, with the advantage of specific antibiotic therapy, the outcome is largely the responsibility of the primary physician. Only early diagnosis and referral to a neurosurgeon can prevent the tragedy of permanent paralysis.

The Authors

- **Charles R. Loar, M. D.; and Thomas R. Connelly, M. D., Residents, Division of Neurosurgery, West Virginia University Medical Center, Morgantown.**

Case Histories

Three patients with acute spinal epidural abscess have been treated at West Virginia University Hospital. Each demonstrates the typical clinical course of the disease.

Case 1: About 12 days prior to admission, this 28-year-old female began to experience pain in the interscapular area with radiation to the right anterior chest wall. She had fever and chills during the first four days of her illness but was afebrile thereafter.

Two days prior to admission, she awakened with numbness and weakness in both lower extremities. This progressed to complete paralysis and loss of sensation below the nipples within four hours.

On admission, in addition to the above neurological deficits, she was found to have a marked leukocytosis and her sedimentation rate was 100 mm./hour. X-rays of the dorsal spine were normal.

A lumbar puncture was performed, and the Queckenstedt test revealed a complete block. The spinal fluid protein content was 950 mgm. per cent; the cell count was normal.

A myelogram was performed at that time and showed a complete obstruction at the eighth dorsal vertebrae (D8).

An emergency, decompressive laminectomy was performed. An epidural collection of thick purulent material was found which extended from D1 to D8. After thorough irrigation with an antibiotic solution the wound was closed primarily with an epidural drain in place.

Cultures and gram stains of the abscess material demonstrated Staphylococcus aureus. Postoperatively, she was treated with erythromycin for five weeks. She survived but has remained completely paraplegic.

Case 2: This 43-year-old white male began to experience fever, chills, malaise and low back pain three days prior to admission. He had been treated with analgesics and bed rest with no relief.

On admission he complained that the back pain had begun to radiate to his right leg. On examination he was found to have slight diminution of his right patellar reflex, but the remainder of the neurological examination was normal. There was an absence of bowel sounds with moderate abdominal distention.

He was found to have a marked leukocytosis. Plain x-rays of the lumbar spine and an intravenous pyelogram were normal. On the following day he remained febrile and had become disoriented. Re-examination revealed definite weakness and loss of sensation in the right leg. A myelogram was performed which revealed an extradural defect beginning at L2 and ending in a complete obstruction at L5.

A decompressive laminectomy was immediately performed. An epidural abscess was found which extended from L2 through S2. As in the first case, the abscess bed was irrigated with antibiotic solution and the wound was closed with an epidural drain in place.

Cultures grew Staphylococcus aureus. The patient was treated with six weeks of intravenous cephalothin. He recovered and was neurologically intact and asymptomatic at the time of discharge.

Case 3: One week prior to admission, this 31-year-old man began to have high fever with frequent chills. On the following day, he complained of left chest wall pain and was thought to have a viral respiratory infection. Two days prior to admission he noticed the beginning of weakness in his right leg and at that time became unable to void. About twenty-four hours before

his transfer here he became completely paraplegic.

Examination on admission revealed complete paralysis of the lower extremities with loss of all sensation except vibration below the lower costal margin.

Lumbar and high cervical punctures were performed and myelography revealed an epidural mass probably extending from D1 to D10.

At surgery, creamy purulent material was found in the epidural space from D1 to D9. This material was evacuated and the abscess cavity was irrigated. The wound was closed with epidural drains in place.

Intraoperative cultures grew Staphylococcus aureus. The patient's septic course responded well to intravenous cephalothin and this therapy was continued for six weeks. During that time, he had no return of neurological function.

Discussion

The preceding cases illustrate the important clinical characteristics of acute spinal epidural abscess. The onset of symptoms is quite abrupt with fever, chills and back pain being the common presenting complaints. Tenderness may be found over the involved portion of the spine and there may be considerable paravertebral muscle spasm.

Usually the patient remains febrile and within a few days will begin to experience radicular pain and neurological deficits localized to the involved nerve roots.

Cord or cauda equina involvement will then progress rather rapidly to produce numbness, weakness and finally, paralysis, below the level of the infection.

To insure good recovery the disease must be recognized and a decompressive laminectomy performed either before or within a few hours after the onset of severe neurological deficit. Heusner,[4] in 1948, emphasized that in his series of 158 patients none recovered whose paralysis had existed more than 48 hours. All deaths in the series occurred in those patients who were completely paraplegic at the time of surgery.

These infections are thought to occur most often as the result of hematogenous spread from remote sources, although direct extension from such lesions as congenital dermal sinuses has been reported.[5] In the vast majority, the infecting organism is Staphylococcus aureus, but other organisms such as Pseudomonas aeruginosa and pneumococcus have been found.[1] The most common site of involvement is the dorsal spine, although lumbar involvement is not uncommon, and cervical abscesses have been rarely reported.

In the acute abscess there is seldom any involvement of the vertebrae.[3] Plain x-rays, then, will be normal, but this information will be useful in the exclusion of chronic vertebral infections such as tuberculosis or vertebral pyogenic osteomyelitis.

Myelography is extremely useful in the localization of the lesion. This should be performed by or under the direction of a neurosurgeon, since meningitis can be caused by the inadvertent passage of the spinal needle through the abscess cavity along its route into the subarachnoid space. In addition, the removal of spinal fluid can hasten the progression of neurological deficit and necessitate immediate surgery.

Studies of the cerebrospinal fluid should demonstrate an elevated protein and mild to moderate pleocytosis, but these findings may be absent. Organisms are rarely found in the spinal fluid on gram stain or culture.

The only additional laboratory tests of value are the blood count, which will show a marked leukocytosis, and intraoperative cultures and gram stains from the abscess contents. Preoperative blood cultures may demonstrate septicemia but are of little benefit otherwise.

As previously stated, treatment consists of immediate surgical decompression and drainage of the abscess. Most often, the wound can be closed primarily with tube drainage. Intravenous antibiotic therapy should be begun during surgery and, until the causative organism is identified, it should be directed at the most likely bacteria, Staphylococcus aureus. Although length of antibiotic treatment has varied in previous reports, in our cases five to six weeks of treatment has yielded good results.

The most important aspect of the therapy is its timing: only early treatment insures that the patient will survive without serious handicap.

References

1. Baker, Carol J.: Primary Spinal Epidural Abscess. Amer. J. Dis. Child. 121:337-339, 1971.
2. Dandy, Walter E.: Abscesses and Inflammatory Tumors in the Spinal Epidural Space. Arch. Surg. 13:477-494, 1926.
3. Epstein, Bernard S.: The Spine. Philadelphia, Pa., Lea Febiger, 1969.
4. Heusner, A. P.: Nontubercular Spinal Epidural Infections. N. Eng. J. Med. 239:845-854, 1948.
5. Stammers, F. A.: Spinal Epidural Suppuration with Special Reference to Osteomyelitis of the Vertebrae. Brit. J. Surg. 26:366-374, 1938.

Congenital Sarcoma of the Hand
(A Case Report)

John P. Evans, M. D.; and Lawrance S. Miller, M. D.

CONGENITAL sarcoma in children are rare malignancies, being sixth in the order of incidence in children.[4] This report discusses a patient treated at Monongalia County General Hospital and at the West Virginia University Medical Center. The purpose of this report is to recommend early and aggressive therapy if this tumor is encountered.

The Authors

- **John P. Evans, M. D.; and Lawrance S. Miller, M. D., Clinical Professor, Division of Orthopedic Surgery, West Virginia University Medical Center, Morgantown.**

Case Report

The patient, J. E., was born May 13, 1973. He was the product of a full-term pregnancy plus ten and one-half hours of labor. There was no history of prenatal maternal illness. The maternal grandmother had a cervical carcinoma. The maternal grandfather had an unknown cancer. The paternal grandmother had cervical carcinoma. At birth, the mother noted a small spot on the palm of the child's left hand. It did not change until two weeks after delivery, when it began to grow rapidly.

Initial examination on June 19, 1973, showed a large, soft, easily depressed swelling in the midpalm of the left hand, mainly along the thenar eminence and the first web space. There was also some swelling of the dorsum of the hand in the third and fourth metacarpal areas (Figure 1a). Superficial sensation in the hand was normal and reflex hand movements were noted. The initial hemoglobin was 12.0 gm. per cent, and hematocrit, 35 per cent. White blood cell count was 9800 mm.,^{3} PMN's, 34 per cent; lymphocytes, 51 per cent; monocytes, 9 per cent, and eosinophils, 6 per cent. The erythrocyte sedimentation rate was 24 mm./hr. The chest x-ray was reported negative. A needle aspiration of the mass was performed but no fluid was obtained.

On June 21, 1973, the hand was explored and revealed a dark reddish-brown tumor mass with the nerves to the index, long and ring fingers stretched over it (Figure 1b). The mass extended dorsally into the hand without evidence of a limiting capsule. It also extended deep into the palm to involve the interosseus muscles. The mass was ruptured and a pinkish liquid tissue exuded.

Sections of the lesion (Figure 2a) showed a mass of undifferentiated malignant sarcomatous cells without any recognizable pattern. There was no necrosis noted. An average of five to 10 mitotic figures per high power were viewed. The individual cells had large nuclei with a vacuolated empty appearance and prominent nucleoli. Little cytoplasm was present in these cells. The cells were monotonous and closely packed together. A Trichrome stain revealed that little connective tissue stroma was present and that the tumor had infiltrated both muscle and adjacent

Figure 1a. The left hand just prior to initial exploration.

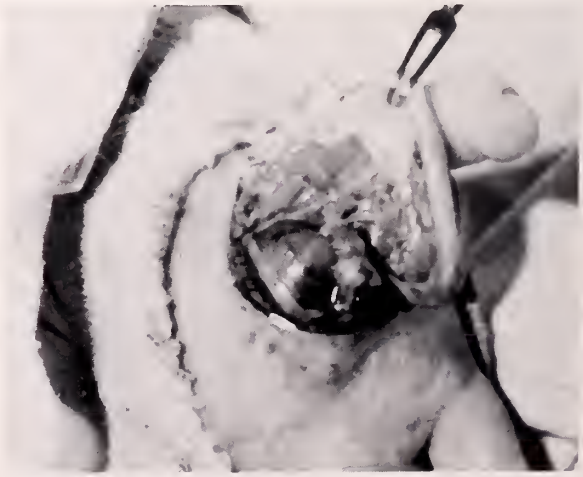


Figure 1b. The left hand at the initial exploration.

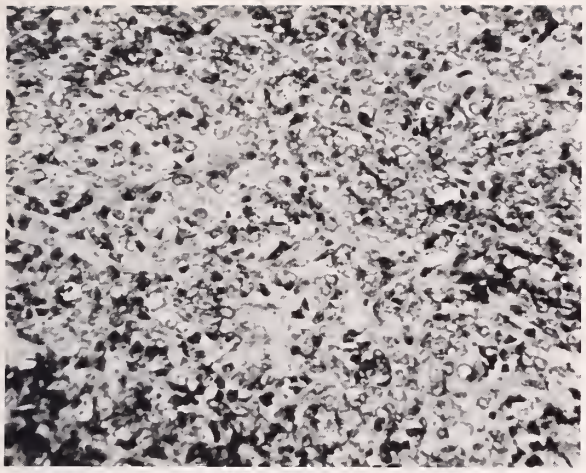


Figure 2a. A low-power section of the primary tumor (Hematoxylin and eosin, x 252).

connective tissue. It was the opinion of the Soft Tissue Branch of the Armed Forces Institute of Pathology that this tumor was a poorly differentiated sarcoma.

Because of local recurrence in the hand (Figure 3b), an above-elbow amputation was done on August 22, 1973. By September 10, 1973, the axillary nodes were found to be hard, large and palpable and an axillary dissection was performed. By September 28, 1973, local recurrence was again present at the stump, another large axillary node was present and a radiopaque mass was seen in the right upper lung field. Sections of the recurrent mass (Figure 2b) at the stump showed a histological structure similar to the hand mass.

The child was started on Adriamycin on October 4, 1973. The initial course was ten mgm./day for three days. He had several courses at this level until gastrointestinal bleeding and bone marrow suppression occurred. When the dose was

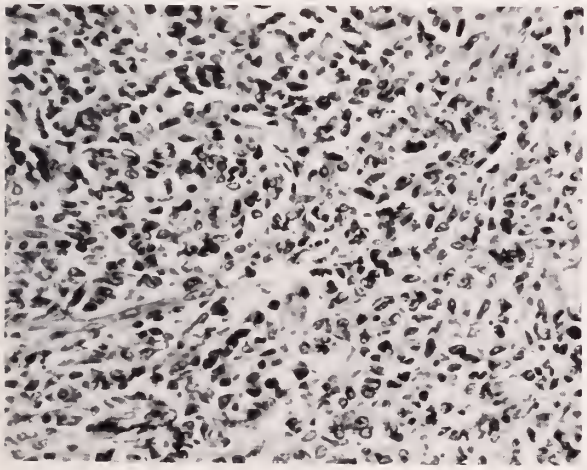


Figure 2b. A low-power section of the metastatic lesion (Hematoxylin and eosin, x 252).

reduced to five mgm./day for three days, the child tolerated the drug well. Three thousand rads at skin depth was given to the stump, axillary nodes, and supraclavicular nodes over one month's time, from January 3, 1974, to February 1, 1974. Because of massive regrowth of the chest mass, 1500 rads were given to the chest between March 14, 1974, and March 28, 1974. Cytoxan (120 mgm. IV) and Vincristin (0.8 mgm. IV) were alternated weekly, beginning on April 5, 1974. When the patient was readmitted on May 13, 1974, with tachypnea, massive pulmonary metastases and vomiting, only supportive care was given. He expired on May 15, 1974.

Discussion

Soft tissue sarcoma arises from the primative mesemchymal cells found in all connective tissue. In children these tumors are rare. In reviewing 116 malignant, solid tumors at Baby's

Figure 3a. Recurrent mass in the left palm.

Hospital in New York from 1935 through 1950, Anderson[1] found only 24 cases of soft tissue sarcoma. Kauffman,[2] in 1965, after reviewing all the literature, could only define 120 cases as being congenital, that is, being present at birth or during the first week of life. The origin of these tumors is still obscure. Wells[5] did not find a single case of congenital carcinoma after reviewing the literature. The strong family history of cancer in this case may indicate a hereditary influence.

Prognosis in these cases depends on age, location of the primary, extent of disease at time of diagnosis, histological variety, and treatment.[3] Extent of the disease process is the most important factor.

Treatment should be directed at preventing metastases if none are present at the time of diagnosis. The need for amputation in extremity

Figure 3b. Recurrent mass in the left hand, dorsal view.

primary sites is still moot. No definite advantage of amputation versus wide local excision has been found.[4] These tumors are often so entwined with local vital structures that wide excision is impossible. Radiation doses in the 5,000 to 7,000 rads range have produced local shrinkage of rhabdomyosarcomas.[4] It has been shown significantly that chemotherapy has also been beneficial to patients thought to be tumor-free after surgery and irradiation.[4] The overall survival of children with rhabdomyosarcomas, the most malignant and common of these soft tissue tumors, averages 30 per cent with surgery, irradiation and chemotherapy. No specific controlled studies have been done with the type of tumor present in this report.

Based on its effectiveness in rhabdomyosarcoma, chemotherapy should be included in the regimen of surgery and irradiation when confronted with this unusual tumor.

Summary

A report of a congenital undifferentiated sarcoma is presented. It was present at birth and diagnosed by biopsy six weeks later. Surgery and systemic antimetabolites slowed the course of this malignancy. This report recommends aggressive and early therapy.

References

1. Anderson, D. H.: Tumors of Infancy and Childhood. Cancer. 4:890-906, 1951.
2. Kauffman, S. L., and Stout, A. P.: Congenital Mesenchymal Tumors. Cancer. 18:460-475, 1951.
3. Ragab, A. H.: Malignant Tumors of the Soft Tissues. In: Clinical Pediatric Oncology. Edited by W. W. Sutow. pp. 450-472. St. Louis, Mosby. 1973.
4. Raney, R. B., Jr.: Soft Tissue Sarcoma in Childhood. Seminars in Oncology. 1:1, 57-64, Mar., 1974.
5. Wells, H. G.: Occurrence and Significance of Congenital Malignant Neoplasms. Arch. of Path. 30:535-601, 1940.

Easing Drug Withdrawal

Dr. Herbans Lal of the University of Rhode Island has reported a study that indicates a heroin addict's environment may be manipulated to reduce withdrawal sickness.

Doctor Lal says he has found that withdrawal symptoms can be reduced in addicted rats if they are kept in the environment associated with its "fix." According to the researcher, the rats were taught to associate sounds and smells with their daily dose of morphine in a variety of experiments. When the morphine was stopped, withdrawal symptoms began. However, if the animal was then exposed to the sound or smell that it associated with its dose of morphine, the severity of symptoms decreased.

Medical Grand Rounds

From the West Virginia University Medical Center

Edited By

Raymond B. Weiss, M. D.

Associate Professor of Medicine

Aplastic Anemia: A Serious Complication Of Viral Hepatitis

Discussants: Phillip J. Peters, M. D.; Brian Davies, M. D.; And Stuart T. Chen, M. D.

Phillip J. Peters, M. D., Medical Resident, West Virginia University Hospital.

Case Presentation

The patient is a 21-year-old white male who was admitted to the hospital because of symptoms of persistent hepatitis. On admission he gave a history of four weeks of nausea, vomiting, and generalized malaise accompanied by jaundice and dark urine. He denied any history of licit or illicit drugs, gave no history of exposure to hepatitis, had received no transfusions or injections, and had not ingested any contaminated water or food.

Physical examination revealed a thin male in no acute distress who was jaundiced with several scattered areas of ecchymosis. The liver was palpable 4 cm. below the right costal margin with a total span of 15 cm. and was tender. No spleen or lymph nodes were palpable. A complete blood count revealed a hemoglobin of 11.1 gms. per cent, hematocrit 34, and a white blood count of 2400 with a lymphocytosis. A platelet count was 42,000. Liver function tests were: bilirubin 8.1 mg. per cent, LDH 345 IU/ml., SGOT 415 IU/ml. and alkaline phosphatase 191 IU/ml. The prothrombin time and partial thromboplastin time were normal. An anti-nuclear antibody, Australia antigen, and Monospot for infectious mononucleosis were all negative. The patient's hemoglobin, hematocrit, white count and platelets showed a progressive fall; a bone marrow examination was performed which revealed a severely hypoplastic marrow.

Since diagnosis 10 months ago, the patient has been maintained intermittently on corticosteroids and androgens with minimal success and has required whole blood and platelet transfusions on several occasions. His liver function tests have returned to normal.

Discussion

The association of viral hepatitis with mild anemia and leucopenia has long been known. This condition, however, is benign and self-limiting, usually improving at the onset of icterus. In 1955, Lorenz and Quasier described the first case of aplastic anemia induced by viral hepatitis. In the 20 years since that time approximately 200 cases have been reported in the literature.

There is a typical pattern in the development of the aplastic anemia secondary to viral hepatitis. The patient is usually a young male. One study of 70 patients showed 45 to be males and the mean age to be 18 years. The hepatitis is usually mild to moderate in severity and the patient is frequently recovering from the hepatitis when the aplastic anemia develops. Thirty-five of 38 patients autopsied showed healing hepatitis on microscopic examination of the liver.[1] The bone marrow may appear either hypoplastic or aplastic, but an aplastic marrow carries a much worse prognosis. In one large series, bone marrows from 118 patients showed 75 to be aplastic and 43 to be hypoplastic. Only two of 75 patients with aplastic marrows survived.[2] The presence or absence of Australia antigen is not related in any way to the possible development of aplastic anemia.

The duration of the latent period, defined as the time between the onset of hepatitis and the development of aplastic anemia, was not re-

lated to the severity of the hepatitis. The longer the length of the latent period, however, the longer the survival is after the onset of aplastic anemia.[1]

The two largest review series showed a very poor prognosis for the aplastic complications. Aljouni and Doeblin[1] and Hagler, et al[2] found only 12 per cent and 15 per cent of their patients survived, respectively. In the latter series, males had a better prognosis when adjusted for statistical factors. This raised the question of possible suppressive effect on the bone marrow by estrogens in females.

The series by Haegler, et al[2] also reported the causes of death in 77 patients. Forty-five died of hemorrhagic complications, nine died of infectious complications and 23 died of a combination of hemorrhage and infection.

Various regimens of therapy have been tried, including corticosteroids, androgens, splenectomy, bone marrow transplantation, and Azothiaprine. No therapy has been consistently beneficial, but virtually all patients who survived received androgens either alone or in combination with corticosteroids. Other modes of therapy mentioned above have been essentially without success. The use of androgens in this disease presents a therapeutic dilemma because of their well-known association with a cholestatic picture of hepatic toxicity. Since the patient's liver is already damaged because of hepatitis, some investigators have been reluctant to use androgens. As long as the liver function is closely monitored, however, it is generally felt that the potential benefits of androgen administration far outweigh its risks.

Many theories on the pathogenesis of the association of aplastic anemia and viral hepatitis have been suggested but no one theory has been substantially proven. Among the more acceptable theories are:

1. Failure of the liver to provide hematopoietic nutrients or to detoxify some intermediate metabolite or drug which may be myelotoxic. This does not explain the extremely low incidence of this complication in viral hepatitis, however, and there are no distinguishing clinical features until the onset of pancytopenia to suggest a myelotoxic reaction.

2. Increased virulence of the hepatitis virus, the acquisition of myelotoxic potential by the viral genome, or a direct viral-induced marrow damage have all been postulated. Viral infections have been shown to affect the hemapoietic system adversely. Aplastic anemia has been reported following a case of infectious mononucleosis[3] and profound bone marrow hypoplasia has been found in animals following Australian equine encephalitis.[4] In addition, viruses which cause human hepatitis apparently differ in virulence toward the liver and may vary in their ability to invade and depress the bone marrow. An example of this is murine hepatitis virus in animals, which causes significant bone marrow depression and has been shown to be associated with a high virus concentration in the bone marrow. High antibody titers have been found in humans, but, to date, they have not been associated with clinical hepatitis. The possibility does exist, however, that aplastic anemia and hepatitis may be the result of a viral agent differing from that associated with human hepatitis in most cases.

3. Viral-induced chromosome damage has been suggested. Chromosome breaks have been shown in human leukocyte cultures subjected to serum from infectious hepatitis patients.[5] If chromosome damage occurred in the primitive stem cell of the bone marrow, this would explain the poor prognosis for recovery in these patients. It might also explain the longer survival time in patients with the longer latent period since these patients might have only a portion of the stem cells affected.

4. Viral-initiated autoimmune mechanisms may play a role. Antibodies produced in response to the hepatitis may be cross reactive with bone marrow tissue.

5. Another possibility is an individual susceptibility on an unexplained basis. This could be due to some undetermined biochemical mechanism which fails to repair virus-induced nucleoprotein damage.

In summary, aplastic anemia secondary to viral hepatitis is a disease of young adults, predominantly males. The development and severity of the aplastic anemia is not related to the severity of the hepatitis. It carries a high mortality and all modes of therapy have proven ineffective with the exception of slight success with the use of androgens. The pathogenesis of this disease remains a mystery at present.

Brian Davies, M. D., Instructor of Medicine.

There are a number of very interesting points to this young man's illness. You have heard that aplastic anemia following viral hepatitis might be due to a different virus, murine in origin, as opposed to viral hepatitis, Type A. We have still no rapid, easy test to confirm infectious hepatitis, Type A, but a promising development was recently reported using as an antigen, an extract from the liver of marmosets infected with human

hepatitis A virus.[6] By the technique of immune adherence, a sensitive and specific detection of hepatitis antibody was found in 20 patients with viral hepatitis. Whether this test will become routinely available is not yet answered.

The other aspect of this complication of viral hepatitis that I find intriguing is that the peak incidence of detection of aplastic anemia is some four weeks after the onset of viral hepatitis. We know that, immunologically, for virus infections in man, there is an initial increase in total antibody titers, but that this is not specific for the virus.[7] The viral-specific antibody rise is often delayed some three to four weeks, and in the context of this case, this suggests that specific antibody may be the cause of the aplastic anemia, perhaps due to common antigenic determinates between the virus and the bone marrow stem cells.

Stuart T. Chen, M. D., Associate Professor of Medicine, Division of Gastroenterology.

I would like to discuss briefly some additional extra-hepatic complications of viral hepatitis. They are: serum sickness-like syndrome, polyarteritis nodosa, glomerulonephritis and primary hepatoma.

Sir Robert Graves, in 1843, first described a serum sickness-like syndrome during the prodromal phase of viral hepatitis. It is marked by rashes (urticarial, maculopapular, or erythematous), arthralgia and angioneurotic edema.[8] This syndrome is related to circulating immune complexes of Hepatitis B surface antigen (HB_sAg), HB_s antibody, and complement (B_1C) which are thought to excite the inflammatory process.[9] The joint and skin symptoms can be prominent even in anicteric cases.

Polyarteritis nodosa has long been thought to be due to a hypersensitivity reaction. Immune complexes containing HB_sAg, IgM and B_1C have been found in the blood vessel walls of some patients with polyarteritis nodosa and may play an etiologic role. According to one author, Hepatitis B virus is responsible for approximately 50 per cent of the cases of polyarteritis nodosa.[10]

HB_sAg immune complexes have been identified in kidney glomeruli and blood vessel walls in biopsy specimens from patients with chronic hepatitis and protracted HB_s antigenemia. The glomerular lesions are those of chronic membranous glomerulonephritis and chronic membrano-proliferative glomerulonephritis. Similar lesions were encountered at the sites of HB_sAg immune complexes in kidney glomeruli and blood vessel walls in a significant percentage of patients who died from various forms of acute and chronic hepatitis. Deposits of HB_sAg immune complexes were identified in 33 per cent of unselected kidney biopsies from children with nephrosis and/or glomerulonephritis,[11] and thus HB virus may be responsible for one-third of the cases of glomerulonephritis in children.

HB_s antigenemia has been found in a significant percentage of patients with primary hepatoma.[12] The incidence varies from 30 per cent to 80 per cent according to geographic locations, being higher in Africa and Southeast Asia than in Europe and North America. Hepatitis B core antibody (HB_cAb) is present in much higher titer and frequency than HB_sAg in these patients.[13] The positive incidence of HB_cAb in up to 95 per cent of patients with hepatoma strongly suggests an etiological role of HB virus in this disease.

References

1. Aljouni, K., and Doeblin, T. D.: The Syndrome of Hepatitis and Aplastic Anemia. Br. J. Haematol. 27:345-355, 1974.
2. Hagler, L.; Pastore, R. A., and Gergin, J. J.: Aplastic Anemia Following Viral Hepatitis. Medicine. 54:2, 139-164, 1975.
3. Worlledge, S. M., and Dacie, J. V.: Haemolytic and Other Anemias in Infectious Mononucleosis. Infect. Mono. (Ed. by R. L. Carter and H. G. Penman). Oxford; Blackwell Scientific Publications, p. 82, 1969.
4. Howie, D. L., and Crosby, W. H.: Bone Marrow Panhypoplasia in Humans Experimentally Induced by Viral Infection. Blood. 18:800-801, 1961.
5. El-Alfi, O. S.; Smith, P. M., and Biesele, J. J.: Chromosomal Breaks in Human Leukocyte Culture Induced by an Agent in the Plasma of Infectious Hepatitis Patients. Hereditas. 52:285-294, 1965.
6. Krugman, S.; Friedman, H., and Lattimer, C.: Viral Hepatitis Type A, Identification by Specific Complement Fixation and Immune Adherence Tests. N. Eng. J. Med. 292:1141-1143, 1975.
7. Editorial: Virus Hepatitis Updated. Lancet. 1:1365, 1975.
8. Sherlock, S.: Diseases of the Liver and Biliary System. 5th Ed., Oxford; Blackwell Scientific Publications, p. 325-339, 1975.
9. Alpert, E.; Isselbacher, K. J., and Schur, P. H.: The Pathogenesis of Arthritis Associated with Viral Hepatitis: Complement-Component Studies. N. Eng. J. Med. 285:185-189, 1971.
10. Gocke, D. J.; Hsu, K., and Morgan, C., et al: Association Between Polyarteritis and Australia Antigen. Lancet. 2:1149-1153, 1970.
11. Brzosko, W.; Krawczynski, K., and Nazarewicz, T., et al: Glomerulonephritis Associated with Hepatitis B Surface Antigen Immune Complexes in Children. Lancet. 2:477-481, 1974.
12. Vogel, C. L.; Anthony, P. P., and Mody, N., et al: Hepatitis Associated Antigen in Ugandan Patients with Hepatocellular Carcinoma. Lancet. 2:621-624, 1970.
13. Maupas, P.; Werner, B., and Larouze, B., et al: Antibody to Hepatitis B Core Antigen in Patients with Primary Hepatic Carcinoma. Lancet. 2:9-11, 1975.

A message from . . .

The President

OPTOMETRY—A NEW MEDICAL SPECIALTY?

LEGISLATION proposed, and partially enacted, during the 1976 session of the State Legislature is a move toward creating a new medical specialty—that of the diagnostic, therapeutic and surgical optometrist, a new "doctor," indeed!

In attending both House and Senate Judiciary Committee hearings on this legislation, I was appalled to learn that potentially thousands of West Virginians with possible blinding glaucoma, keratitis, iritis, uveitis, corneal abrasion, conjunctivitis and embedded foreign bodies, can be reporting to non-medical practitioners for treatment. Many more may have less serious conditions, but by actual plan they would be seen *first* by someone without the benefit of medical training, education and internship. That someone—an optometrist—would have the awesome authority, by law, to either diagnose patients' problems; treat those patients; or refer them to a physician, hopefully in time to prevent blindness or irreparable damage because of delayed treatment. The patient would be referred to a physician only if the optometrist feels it is necessary.

I hoped that this legislation could be defeated. The simple truth is that optometrists cannot diagnose or treat completely eye diseases. They are making a dangerous attempt to invade the practice of medicine.

The legislators of our State must understand that primary eye care is essentially medical in nature. Ambulatory patient care services in ophthalmologists' offices alone are about 90 to 95 per cent medical, as distinguished from surgical services. These services consist of in-office medical diagnosis and treatment. Only physicians and osteopaths are presently trained and, indeed, are presently authorized legally to diagnose and treat eye disease.

When a patient has an ocular complaint or reduced vision, the primary responsibility is to determine the *cause* of the problem. This is a medical evaluation, which includes refraction. If the patient needs only corrective lenses, an optometrist can measure the refracture error and provide glasses, providing a service within his normal purview.

All physicians are dedicated to the prevention, diagnosis and treatment of disease. This constitutes the maintenance of good health, a basic medical responsibility fulfilled best by those trained in medicine. There can be no justification for compromising the high quality eye care now available to West Virginians by permitting non-physicians to care for medical problems.

It is not for optometry to tell physicians how to practice medicine.

Jack Leckie

JACK LECKIE, M. D., *President*

THE WEST VIRGINIA MEDICAL JOURNAL

Official Organ of the West Virginia State Medical Association

The Publication Committee is not responsible for the authenticity of opinion or statements made by authors or in communications submitted to this Journal for publication. The author or communicant shall be held entirely responsible

Editor
GEORGE F. EVANS, M. D.
122 South Sixth St.
Clarksburg, W. Va.

Managing Editor and
Business Manager
MR. CHARLES R. LEWIS
Box 1031
Charleston, W. Va. 25324

Associate Editors:
VERNON E. DUCKWALL, M. D.
Elkins
JOHN M. HARTMAN, M. D.
Charleston
THOMAS J. HOLBROOK, M. D.
Huntington
JOE N. JARRETT, M. D.
Oak Hill
EDWARD J. VAN LIERE, M. D.
Morgantown
STEPHEN D. WARD, M. D.
Wheeling

Published monthly on the first day of the month, at Charleston by the West Virginia State Medical Association. Original articles are accepted on condition that they are contributed exclusive to the Journal. Advertising rates furnished on request.

Address all communications to Business Manager, West Virginia Medical Journal, Box 1031, Charleston, West Virginia 25324. Phone 346-0551.

EDITORIALS

CORNEAL ARCUS AND CARDIOVASCULAR DISEASE

Any objective symptom which might indicate the presence of cardiovascular disease deserves serious attention. There has been, and still is, considerable controversy in regard to the presence of corneal arcus with respect to the existence or subsequent development of coronary heart disease. In this connection it will be remembered that the opacity produced by corneal arcus is due to a deposition of cholesterol, phosopholipids and neutral fat in the surface membrane of the peripheral cornea. It is supposed that the fat content of arcus is derived from the blood, which suggests an analogy with atherosclerosis.

In 1975, Klein, et al[1] published a paper in *The Archives of Internal Medicine* in which they described interrelationships between age and corneal arcus with sex, race, cholesterol, blood pressure, and coronary heart disease in residents of a county in Georgia. This study was initiated in 1960 and made on residents who were over 39 years of age; 3,162 people were included in the study. Follow-up examinations were done between the years 1967 and 1969. It is of interest to comment briefly on some of their findings.

These workers observed a significant increase in prevalence of corneal arcus with increasing age in all groups, but it was pointed out that this was not new, for it has been found in previously studied populations. They did note, however, that arcus occurred more frequently and at an earlier age in blacks than in whites. It has been reported that there is a positive association of cholesterol with arcus, although this is not a consistent finding. Despite the fact that the prevalence rate of arcus was greatest in blacks, this group did not have the highest cholesterol levels. White males with arcus showed a higher rate of coronary heart disease than did those without arcus. This association is of distinct clinical importance; the authors emphasize that this group of white males presumably is at the highest risk of coronary disease. It was noted, however, that the presence of arcus did not appear to be a predictor of eventual coronary disease. It was pointed out that this may be due to a lack of knowledge as to the duration of arcus before coronary disease became apparent.

This careful and rather exhaustive study made by Klein, et al is worthwhile and of clinical importance. Obviously, however, further studies are needed to prove or disprove beyond any doubt that the presence of arcus is definitely associated with cardiovascular disease.

1. Klein, B., et al.: Arch. Int. Med. 135:509 (April) 1975.

STATE MEDICAL EXAMINER ARTICLE 'HISTORICAL ESSAY'

Elsewhere in this issue of *The Journal* is an historical essay concerning the birth and growth of the State medical examiner system. It should be read by all of our members and filed in the archives; the system is a product solely of the West Virginia State Medical Association. Those members who have been active in the business of the Association in the past 25 years will recall, vividly, the ups and downs in the preliminary planning of this important act of forensic medicine in West Virginia.

For a century, West Virginia operated under the ancient coroner system, and in many areas of the State there was no system at all. Even in our most populous county, the coroner was a Justice of the Peace. In 1970, a majority of our counties did not have a physician in the coroner position. Most coroners were ill trained, ill equipped and many of them were irresponsible. They often must have allowed the dead to be buried, leaving untouched tangible evidence that could have yielded the answers to many unsolved deaths.

This greatly needed medical legislation was in the legislative repositories for six years before it was finally adopted into law in 1963. Because of lack of funds and inability to get a competent director, the service was unused for several years. Now fully funded and expertly staffed, the system has come to be an integral part of West Virginia justice.

As the Association looks with pride upon the development of this system of medical care, it should remember all those physicians who devoted their services for years, freely and voluntarily, to bring this plan into action. It is truly an accomplishment of and by the State Medical Association. The guiding light in the early struggle for the medical examiner system was the late Dr. Richard W. Corbitt, who worked unceasingly in the Council and the Legislature to bring about this project, which is a fitting tribute to his dedication.

Our thanks are due to Dr. Irvin M. Sopher for this excellent presentation. May this paper kindle the enthusiasm of the Association until the Medical Examiner's system is firmly rooted in the judicial process of West Virginia.

MORTALITY AMONG MEDICAL STUDENTS AND YOUNG PHYSICIANS

In the *Journal of Medical Education* (August, 1975) an article appeared by Everson and Fraumeni, which concerns mortality rates among medical students and young physicians. This study is of considerable importance, as the authors point out, because medical students and young physicians are occupationally exposed not only to various diseases having an infectious nature, but often also to stressful working conditions. The number of deaths of this group was compared to the general population and high socioeconomic groups.

The data for the numbers and causes of death among medical students over a four-year period (June, 1967 to June, 1971) were obtained from reports of the Association of American Medical Colleges. The death rate was calculated from total enrollment statistics obtained from the *Journal of the American Medical Association.* The rate obtained was compared with white males, aged 20 to 24, for 1967, excluding those in the armed forces and stationed over seas.

To obtain data of deaths of physicians less than 40 over a five-year period (1966 to 1971), death notices were obtained from the J.A.M.A. The figures showed 493 fatalities. In order to obtain the physician population risk, the number of physicians of both sexes under age 40 on December 31, 1967, was also obtained from the J.A.M.A. The figure was multiplied by five, since that was the number of years covered by the study. For the sake of comparison, United States white male death rates for age 25 to 39 were computed from mortality statistics applied to the physician population to yield expected numbers of physician deaths.

Only 55 deaths among medical students were recorded, compared with 271 expected from the death rate for United States white males aged 20 to 24. This figure represents only 20 per cent of that anticipated. Per 100,000, the death rate of medical students of all ages was 37, while that of United States white males aged 20 to 24 was 183. Of the 55 medical students who died, the cause of death was specified for only 26, somewhat less than one half of them; there were 14 accidental deaths, five suicides, two probable suicides, three carcinomas, one leukemia, and one serum hepatitis.

The mortality rate among physicians under age 40 was only 41 per cent of that expected for a comparable group of white males. The death rates for physicians and for the white male popu-

lation in this age group were 80 and 201 per 100,000, respectively. The figures for physicians are not exactly correct since it is generally recognized that the J.A.M.A. publishes about only 90 per cent of physicians' deaths.

In sum, the figures appear to show rather clearly that both medical students and young physicians have lower mortality rates than people of comparable ages in the general population. This is true despite the fact that they are occupationally exposed to various diseases and often work under stressful conditions. The authors point out that much of the favorable mortality rates in medical students and young physicians can be attributed to the fact that medical schools select only healthy individuals. Both groups live in an atmosphere which enables them to take advantage of excellent medical care. It is admitted that probably not all of them do so. It is also true that on the average both groups under discussion come from a higher socioeconomic level than the average United States citizen of comparable age. These variable factors mentioned doubtless play an important role in accounting for the lower mortality rates of medical students and young physicians. At any rate, it is difficult, indeed, to offer more fitting explanations.

Everson, R. B., and Fraumeni, J. F.: J. Med. Education. 50:809, 1975.

PHYSICIANS' SEMINARS TO EXPLORE LINK WITH THE HUMANITIES

The National Endowment for the Humanities will again support a program of humanities seminars for physicians and other members of the health professions in 1976. The seminars will bring medical practitioners together with distinguished humanists from the fields of history, religion, sociology and philosophy for a month of full-time study devoted to such issues as ethical conflicts, the rights of patients and practitioners, the purpose and limits of the medical professions and their relations to the community.

Up to 15 participants will attend each seminar tuition-free and will receive a $1,200 stipend to cover expenses, plus reimbursement for travel up to a $300 maximum.

John C. Burnham, Professor of History and Lecturer in Psychiatry at The Ohio State University, will direct a seminar on his University's campus August 9-September 3. The aim of this seminar will be to identify the particular historical forces which have shaped the medical profession and determined the direction of its development. It will attempt to sharpen the participants' understanding of their profession by studying it in the context of Western culture and how it has been involved in the forces of social change.

H. Tristram Engelhardt, Jr., a philosopher and physician who is Associate Professor of the Philosophy of Medicine in the Institute for the Medical Humanities of the University of Texas Medical Branch at Galveston, will direct a seminar at his University September 13-October 8. The seminar will examine the general issue of patients' rights and the particular issue of the right to health care through a consideration of the basic philosophical and ethical issues that bear on the status of the individual and the nature of justice.

Renee C. Fox, Professor of Sociology in the Departments of Sociology, Psychiatry and Medicine at the University of Pennsylvania in Philadelphia, will conduct a seminar on her University's campus June 1-30. The seminar will examine from a cross-cultural perspective the ways in which social and cultural forces influence certain present-day medical phenomena and problems in American society. Conceptions of health and illness, the process of professional development, the hospital as a social system, modern medical research, and bio-ethical issues in contemporary medicine are among the topics to be considered.

William F. May, Professor and Chairman of the Department of Religious Studies at Indiana University in Bloomington, will direct the fourth seminar on the Stanford University Campus in Stanford, California, June 28-July 23. Participants will explore basic ways of interpreting human nature and obligation as they affect decisions in medical practice. The seminar will also attempt to clarify the role of the practitioner in the several communities in which he or she operates, including the doctor-patient relationship, the family facing medical crisis, and the decision-making ethos of the hospital.

Applications are invited from physicians and other members of the health professions. The application deadline for the University of Pennsylvania and Stanford University seminars is April 15, with selections to be announced about April 22. The application deadline for The Ohio State University and University of Texas seminars is May 13; selections will be announced about May 28.

Further information may be obtained from the four seminar directors named above.—*Guest Editorial by the National Foundation On The Arts And The Humanities.*

GENERAL NEWS

Two Prominent Speakers Selected For 109th Annual Meeting

Dr. Robert D. Hess of Bridgeport, Chairman of the Program Committee, has announced that Dr. Richard B. Hornick of Baltimore and Dr. Paul M. Stevens of Houston have accepted invitations to

Richard B. Hornick, M. D.

Paul M. Stevens, M. D.

present papers during the 109th Annual Meeting of the West Virginia State Medical Association which will be held at The Greenbrier in White Sulphur Springs, August 18-21.

Doctors Hornick and Stevens will speak at the first general scientific session on Thursday morning, August 19, which will be devoted to a "Symposium on Pulmonary Disease."

Richard B. Hornick, M. D.

Doctor Hornick, a native of Johnstown, Pennsylvania, is Professor and Director, Division of Infectious Diseases, at the University of Maryland School of Medicine in Baltimore. He was graduated from Johns Hopkins University and received his M. D. degree in 1951 from that institution's School of Medicine. He served an internship and residency at Johns Hopkins, and a residency at the University of Maryland Hospital.

Certified by the American Board of Internal Medicine, Doctor Hornick was the American College of Physicians' Governor for the State of Maryland in 1974.

In Baltimore, he is a member of the Board of Directors of Mercy Hospital and a consultant for the Veterans Administration Hospital, the United States Public Health Service Hospital, the National Cancer Institute and St. Agnes Hospital. He also is a consultant for the U. S. Food and Drugs Administration's Committee on Anti-Infective Agents at Rockville, Maryland; and was a consultant in 1971 for the World Health Organization at Geneva, Switzerland. He is the author or co-author of more than 100 scientific articles.

Paul M. Stevens, M. D.

Doctor Stevens is Professor of Medicine and Chief of the Pulmonary Section at Baylor College of Medicine in Houston; and Chief of the Pulmonary Section at The Methodist Hospital in that city. He has held a variety of other teaching assignments at Baylor, Rice University, the University of Texas, and the University of Kentucky.

Doctor Stevens is the past recipient of several awards for outstanding clinical teaching, and was named for an Excellence in Teaching Award by the Baylor classes of 1970-75. He also received the Phi Chi Medical Fraternity's Outstanding Teacher Award in 1973.

Doctor Stevens was graduated from the University of Maine and received his M. D. degree in 1958 from the University of Vermont. He served his internship in internal medicine at the Medical Center of Seton Hall College of Medicine in Jersey City, New Jersey; and did additional postgraduate work at Massachusetts General Hospital and Harvard University with a subspecialty in pulmonary diseases under Dr. John H. Knowles. He is certified by the American Board of Internal Medicine and its Subspecialty in Pulmonary Diseases. He is a Fellow of the American College of Physicians and the American College of Chest Physicians. He is the author or co-author of a number of scientific articles.

Doctor Palmer Honor Guest

It was announced previously that Dr. Richard E. Palmer of Alexandria, Virginia, had accepted an invitation to speak at the first session of the House of Delegates on Wednesday afternoon, August 18. Doctor Palmer will be installed as President of the American Medical Association during the annual meeting at Dallas in June.

Business, Other Meetings

Current indications point to an increased number of breakfast, and other, scientific and business meetings of sections and societies affiliated with the State Medical Association on Friday and Saturday.

The list of organizations holding breakfast meetings—scientific and/or business sessions—will be

increased by at least two: the West Virginia State Society of Anesthesiologists and the newly organized section of dermatologists which will seek official status from the House of Delegates during the Annual Meeting.

Serving with Doctor Hess on the Program Committee are Drs. Carl B. Hall of Charleston, John J. Mahood of Bluefield, Robert P. Pulliam of Beckley, Lyle D. Vincent of Parkersburg, and Alvin L. Watne of Morgantown.

Mid-Winter Clinical Conference Registration Totals 201

Registration for the Ninth Mid-Winter Clinical Conference held January 30-February 1 in Charleston totaled 201—not including still another estimated 200 public school teachers and lay people who attended the Friday night public session. The conference attracted 157 physicians, approximating last year's physician attendance.

The physicians and others gathered at the Daniel Boone Hotel for the three-day conference to hear 11 speakers, including three from out-of-state. Scientific papers were presented on a variety of topics generally covering the disciplines of surgery, gastroenterology, pediatrics, ophthalmology, internal medicine, dermatology, otolaryngology, gynecology and urology. There also was a presentation on continuing medical education.

A highlight of the conference was an address for physicians by Dr. James H. Sammons of Chicago, Executive Vice President of the American Medical Association. Doctor Sammons provided an in-depth discussion and commentary on the AMA's internal affairs, such as the AMA dues increase and the AMA budget; the professional liability insurance crisis, and the AMA's involvement with the Federal government in legislation and matters affecting physicians, including the recent move by the Federal Trade Commission to allow physicians to advertise.

Doctor Sammons also appeared at a news conference for representatives of the Charleston news media, out of which developed a newspaper and two television interviews.

The speaker at the Friday evening public session, held concurrently with the physicians' session at which Doctor Sammons spoke, was Dr. Herman K. Goldberg of Baltimore. His topic for this session, and also for the Saturday morning physicians' session, was "Dyslexia and the Hyperactive Child."

Other lecturing physicians were: Drs. Donald E. McDowell, Clarksburg; Charles E. Turner, Huntington; Thaddeus S. Danowski, Pittsburgh; Peyton E. Weary, Charlottesville, Virginia; and the following physicians from the West Virginia University School of Medicine: Drs. Alvin L. Watne, Philip M. Sprinkle, Charles A. White, D. Franklin Milam and N. LeRoy Lapp.

A number of other medical and related groups met during the conference, including the State Medical Association's Cancer Committee and the Program Committee for the Association's Annual Meeting.

In addition to the 157 physicians, this year's registration included 15 residents, three physician's

A public session on "Dyslexia and the Hyperactive Child" was held Friday evening during the Ninth Mid-Winter Clinical Conference, January 30-February 1, in Charleston at the Daniel Boone Hotel. Presenting introductory remarks were, seated from left (left photo), Mrs. Frances Fuller, Charleston, Supervisor of Consultants in Learning Disabilities for Kanawha County Schools; and Mrs. Hope Stewart, R. N., Charleston, Coordinator of Health Services for the school system; standing, from left, Drs. Herbert H. Pomerance, Charleston, who presided; and the speaker, Herman K. Goldberg, Baltimore ophthalmologist. Doctor Goldberg, Mrs. Fuller and Mrs. Stewart also spoke on the same topic at a session for physicians Saturday morning. In the right photo, Dr. James H. Sammons of Chicago, left, Executive Vice President of the American Medical Association, talks with physicians following his address at the physicians' session held concurrently with the public session Friday evening. The other physicians are, from left, Drs. Charles E. Andrews, Morgantown; Jack Leckie, Huntington, President of the State Medical Association; and Hu C. Myers, Philippi.

In the left photo, Dr. Thaddeus S. Danowski of Pittsburgh (center) chats with two West Virginia physicians during the Ninth Mid-Winter Clinical Conference held January 30-February 1 in Charleston. Doctor Danowski spoke on "Prevention and Treatment of Undue Hyperglycemia and Ketosis" at the Saturday afternoon session. With him are Dr. William D. McLean of Beckley, left, and Dr. John J. Mahood, Bluefield, President Elect of the State Medical Association. On the right, Drs. David B. Gray, Charleston, left, and Joe N. Jarrett, Oak Hill, get together following the final session.

assistants, 12 nurses, two medical students and 12 other health-related personnel.

The Mid-Winter Clinical Conference, which began nine years ago as a small meeting on chest diseases, has grown rapidly as a major continuing medical education event for the State's practicing physicians. It is sponsored by the State Medical Association, with 13 other medical groups joining as co-sponsors for 1976.

Serving on the Program Committee are Drs. Ralph H. Nestmann and Joseph T. Skaggs of Charleston, Co-Chairmen, and Drs. William O. McMillan, Jr., Charleston, and C. Carl Tully, South Charleston.

The 1976 conference was approved for 12 credit hours in Category 1 of the Physician's Recognition Award of the American Medical Association—and for 12 hours of Prescribed Credit by the American Academy of Family Physicians.

Aetna's Experience Suggests 'Do-Nots' for Physicians

New cases reported under the West Virginia State Medical Association's group liability insurance program with Aetna totaled 55 in 1975. Almost one half of those claims (27) arose in the fourth quarter of the year.

Coping with these trends, Aetna and the Medical Association agree, will take effective coordinating of efforts from many quarters. At the risk of offering what may seem to be elementary suggestions, but using its broad experience in the liability insurance field as a base, Aetna has proposed the following "do-nots" for doctors:

—Do not perform any operation until the hospital chart has been checked thoroughly as to the patient's identity, the history, and the particular operation to be performed. Strive for a clear understanding concerning the patient, the family and everyone involved in the case.

—Do not press for the collection of your fee unless you are sure that the patient received proper treatment and has no basis for a malpractice suit. If you do, the patient well may retaliate by filing a cross-claim or a suit for malpractice, thereby causing more expense, embarrassment, and loss of time than the fee is worth. A suit can be more frequently expected in cases of unexpected death, paralysis, brain damage, amputation and blindness.

—Do not make it a habit to diagnose and instruct patients as to treatment over the telephone. The

Doctor James H. Sammons, Executive Vice President of the American Medical Association, is shown above being interviewed by a Charleston newspaper reporter at a news conference held during the Ninth Mid-Winter Clinical Conference, January 30-February 1, at the Daniel Boone Hotel in Charleston. Doctor Sammons, who spoke on "Where the AMA Stands Today" at the Friday evening physicians' session, also was interviewed by several Charleston television stations.

patient may misunderstand the instructions and the physician might have a malpractice suit on his hands. In the event you do, immediately document your records.

—Do not sign mental commitment papers or put the diagnosis in writing until the patient has been brought to your office, or you have seen the patient and have made a complete examination satisfying yourself that commitment is in order.

While this list is not all-inclusive, the keeping of these considerations in mind may preclude your involvement in a future medical malpractice suit.

Pseudoaneurysms Dr. Jones' Topic At ACP-ASIM Regional Meet

Pseudoaneurysms of the left ventricle may be differentiated from true aneurysms by the patient's medical history and x-ray studies, Dr. Reverdy H. Jones, Jr., said at the West Virginia and Western Pennsylvania regional meeting of the American College of Physicians held recently at the West Virginia University Medical Center in association with the West Virginia Society of Internal Medicine.

Correct diagnosis is essential because pseudoaneurysms are prone to rupture and require immediate surgical repair; true aneurysms seldom rupture and frequently need no treatment, said Doctor Jones, Chief of Medicine at the Clarksburg Veterans Administration Hospital.

The true aneurysm is a dilatation of the ventricular wall and is bounded by endocardium and myocardium just as the ventricle itself is. Pseudoaneurysms, conversely, are sac-like out-pouchings from the heart wall surrounded only by the pericardium or fibrous tissue.

Normal x-rays may be of little use in distinguishing between the two types of lesion, because both lesions will appear as a swelling along the left side of the heart. Contrast studies, however, may show the characteristic narrow neck of the pseudoaneurysm; true aneurysms generally are widest at the neck, he said.

The history also may help in differentiating between true and pseudoaneurysms. The pseudoaneurysm is relatively rare and usually follows surgery or other trauma; occasionally, it may develop following MI. True aneurysms usually follow MI, but may develop after trauma.

Congestive heart failure and serious arrhythmias develop in both types of aneurysm. Emboli are probably more frequent in true ventricular aneurysm.

Pseudoaneurysms may produce persistent peri-

Dr. J. C. Huffman of Buckhannon, second from left, greets speakers following the Saturday afternoon session of the Ninth Mid-Winter Clinical Conference as Dr. German Lizzarralde, Charleston, left, who presided, looks on. The speakers shown are Drs. Philip M. Sprinkle, WVU School of Medicine, Morgantown; and Peyton E. Weary, University of Virginia Medical Center, Charlottesville (right).

Dr. Jack Leckie of Huntington, President of the State Medical Association, and Mrs. Leckie, were guests of the Parkersburg Academy of Medicine and its Woman's Auxiliary at its meeting and dinner dance on February 6 at the Parkersburg Country Club. Shown here are, from left, Dr. Robert E. Sams and Mrs. Sams, President of the Auxiliary; Doctor Leckie; Mrs. George Gevas and Doctor Gevas, President of the Academy; and Mrs. Leckie. Other guests included Mr. Charles R. Lewis, Charleston, Executive Secretary of the State Medical Association; and Mr. Custer B. Holliday, Charleston, staff.—Photo by Barbara Dye.

The West Virginia University School of Medicine at Morgantown was represented by four physicians at the final session of the Ninth Mid-Winter Clinical Conference held in Charleston January 30-February 1. From left, are Drs. Charles A. White and N. LeRoy Lapp, lecturers; Dr. John E. Jones, Dean of the medical school, who presided; and Dr. D. Franklin Milam, the third speaker for the session.

cardial friction rubs that can be detected by auscultation, but such signs are not universally present.

100 ACP Members Attend

More than 100 members and guest physicians attended the day-and-a-half program. Several scientific papers were submitted as well as mini-reviews covering hematology, gastroenterology, rheumatology and diabetes.

Costan W. Berard, M. D., Head of the Hematopathology Section, National Cancer Institute, presented Medicine and Grand Rounds, entitled, "Current Concepts of Malignant Lymphomas as Tumors of the Immune System." John F. Otto, Jr., M. D., of Huntington, President, West Virginia Chapter, ASIM, addressed the group.

Third Annual 'Newborn Day' In Charleston March 26

The Third Annual Newborn Day, featuring "A Conference on Hematologic Problems in the Newborn," will be held on Friday, March 26, in Charleston at the Heart 'O Town Motor Inn. The conference

Frank A. Oski, M. D.

Philip Lanzkowsky, M. D.

is sponsored by the Charleston Area Medical Center and the Charleston Division of the West Virginia University Medical Center.

The conference will begin with registration at 8:30 A. M., followed by opening remarks and a welcome by Dr. Herbert H. Pomerance, Professor of Pediatrics, Charleston Division, West Virginia University Medical Center; and Director of Pediatrics, CAMC.

The moderator for the morning session will be Evelyn H. Melnik, M. D., Clinical Instructor in Pediatrics, Charleston Division, WVU Medical Center; and Assistant Neonatologist, CAMC. The speakers and their topics for the morning session, to be followed by a panel and questions, will be:

"The Metabolic Characteristics of the Red Cells of the Newborn Infant"—Frank A. Oski, M. D., Professor and Chairman, Department of Pediatrics, State University of New York, Upstate Medical Center, Syracuse, New York; "Hemorrhagic Diseases of the Newborn"—Philip Lanzkowsky, M. D., Professor of Pediatrics, School of Medicine, Health Sciences Center, State University of New York at Stony Brook; and Chairman and Director, Department of Pediatrics, Long Island Jewish-Hillside Medical Center; and "An Approach to Neonatal Hyperbilirubinemia"—Barbara Jones, M. D., Professor of Pediatrics and Assistant Chairman, Department of Pediatrics, WVU.

Dr. Mark B. Ayoubi, Clinical Assistant Professor of Pediatrics, Charleston Division, WVU, will moderate the afternoon session, beginning at 1:30. The speakers and their topics will be:

"Rh Revisited"—Doctor Lanzkowsky; "The Newborn with Hemoglobinopathy"—Audrey K. Brown, M. D., Professor of Pediatrics, Downstate Medical Center, State University of New York; "The Anemia of Prematurity"—Doctor Oski; "Iron-Fortified Formulas: Who Should Have Them and When"—Doctor Jones; and "Bleeding Disorders in the Newborn"—Doctor Brown.

The evening session, beginning at 7 o'clock, will be moderated by Doctor Pomerance. Doctor Oski will speak on "The Cow's Milk Myth." A summation of the conference will be provided by Dr. Thomas G. Potterfield, Clinical Professor of Pediatrics, Charleston Division, WVU Medical Center; and Chief of Staff, CAMC.

The conference has been approved for six hours of credit in Category 1 of the American Medical Association Physician's Recognition Award.

The registration fee, which includes dinner, will be $25. Pre-registration is required. There will be no fee charged CAMC/WVU residents and students. The cost for the dinner only is $12.

Checks may be made payable to "Charleston Area Medical Center," and sent to: Department of Pediatrics, Charleston Division, WVU Medical Center, 3200 MacCorkle Avenue, S. E., Charleston 25304.

Barbara Jones, M. D.

Audrey K. Brown, M. D.

Continuing Education Activities

Here are the continuing medical education activities listed primarily by the West Virginia University School of Medicine for part of 1976, as compiled by Dr. N. LeRoy Lapp, Assistant Dean for Continuing Education. The schedule is presented as a convenience for physicians in planning their continuing education program. (Other national, state and district medical meetings are listed in the *Medical Meetings* Department of *The Journal.*)

The program is tentative and subject to change. It also should be noted that weekly conferences are held on both the Morgantown and Charleston campuses. Further information about these may be obtained from: Division of Continuing Education, WVU Medical Center, P. O. Box 2867, Charleston 25330; or, Office of Continuing Medical Education, WVU Medical Center, Morgantown 26506.

(1976)

Mar. 6	Internal Medicine Teaching Day	Morgantown
Mar. 25	Diabetes Day	Morgantown
Mar. 26	Third Annual Newborn Day	Charleston
Apr. 1, 2, 3	Cancer Teaching Day	Morgantown
Apr. 23, 24	Lipids Related to Atherosclerosis—Department of Pathology	Morgantown
Apr. 26	Ob.-Gyn. Symposium	Morgantown
Apr. 28, 29, 30-May 1	Department of Surgery and West Virginia Chapter of American College of Surgeons	White Sulphur Springs
Apr. 30-May 1	Seminar on Blood Banking	Morgantown

New officers of the Kanawha Medical Society are shown following the Society's annual dinner dance and installation of officers, held on January 31 in Charleston at the Daniel Boone Hotel. From left, are Drs. Sherman E. Hatfield, Vice President; Jean P. Cavender, Secretary-Treasurer; and Joseph T. Skaggs, President. The new officers were installed by Dr. Jack Leckie of Huntington, President of the State Medical Association.

State Pediatrics Chapter Meeting Scheduled April 1-2, Beckley

The Spring Session of the West Virginia Chapter, American Academy of Pediatrics, will be held April 1 and 2 at the Ramada Inn in Beckley. Registration will be held from 9 to 10:30 A. M. on Thursday, April 1, with opening remarks at 10 A. M. by Dr. Barbara Jones of Morgantown, President.

The speakers and their topics will be "Infant Development in Relation to Prenatal Care"—Thomas Berry Brazelton, M. D., Professor of Pediatrics at Harvard Medical School and Childrens Hospital Medical Center in Boston; "Insect Allergy"—Claude Frazier, M. D., Chief of Allergy, Memorial Mission Hospital, Asheville, North Carolina;

"Fever"—W. Gene Klingberg, M. D., Chairman and Professor of Pediatrics, West Virginia University Medical Center; and "Sexual Ambiguity: Diagnosis"—J. Darrell Smith, M. D., Professor of Pediatrics, WVU Medical Center.

A social hour and banquet will be held Thursday evening beginning at 6 o'clock.

The Friday program will begin with a business meeting of the West Virginia Chapter at 9:30 A. M., conducted by Doctor Jones.

The speakers and their topics will be "Food Allergy"—Doctor Frazier; "Infections in Newborn"—Herbert H. Pomerance, M. D., Director of Pediatrics, Charleston Area Medical Center; and Professor of Pediatrics, Charleston Division, WVU Medical Center;

"Thyroid Diseases in Children and Adolescents"—Guy Hollifield, M.D., Professor of Medicine, Marshall University School of Medicine; and "Diagnosis and Treatment of Pediatric Skin Disorders"—William D. McLean, M. D., Chief of Dermatology, Raleigh General Hospital, Beckley; and Beckley Appalachian Regional Hospital.

There will be no registration fee; banquet tickets are $15 each. Reservations should be made by March 18 with Dr. Grover C. Hedrick, Jr., Chairman, 708 Northwestern Avenue, Beckley 25801.

Dr. Bateman On AMA Medical Discipline Committee

Dr. Mildred Mitchell-Bateman, State Department of Mental Health Director, has been named to the American Medical Association's Ad Hoc Committee on Medical Discipline. The committee was established by the Board of Trustees to study the disciplinary mechanisms of medical associations and determine the effectiveness of medical discipline.

The committee also will recommend appropriate modifications in medical self-regulation and appropriate legislation and governmental regulations; review the procedures by which hospitals limit privileges within the individual physician's competence; and study the relationship between medical discipline and malpractice claims.

ABFP Board Focus On Privileges, Recertification, LCGME

Hospital privileges, details of the upcoming initial recertification procedure and mounting frustration with the Liaison Committee on Graduate Medical Education information policy were foremost concerns of the Board of Family Practice at its annual meeting held recently at Marco Island, Florida.

The action on hospital privileges arose from the Board's Long-Range Planning Committee. The committee's statement, which was approved as amended, was:

"A diplomate of the ABFP should be accorded the same basic consideration in regard to hospital privileges as is given to diplomates of other specialty boards. The diplomate's hospital privileges should be commensurate with training, experience, and demonstrated abilities.

"Within the hospital staff, the diplomate should be eligible for full privileges in the Department of Family Practice in conformity with the department's bylaws.

"Reaffirming the position of the Joint Commission on Accreditation of Hospitals (JCAH) and recognizing the scope of the individual diplomate's formal training, the ABFP believes that the diplomate should be granted clinical privileges in other departments in accordance with their bylaws, and based on his training, experience, and demonstrated abilities."

According to a board official, this action puts the ABFP squarely on record as demanding equal consideration for privileges with other specialties, in line with the stated position of the JCAH.

"This tells our family practice residents and potential residents that we mean business when it comes to hospital privileges," he said. "We are very aware of their concerns, and want them to know that we will do everything in our power to see that they are not discriminated against at any time, anywhere, either officially or unofficially."

The Board considered details relating to the upcoming recertification examination. Discussion centered on the question of how often a recertification candidate would be allowed to take the recertification examination. At issue was the philosophical question of the purpose of recertification—is the process designed to be punitive and exclusive, or a means to help the diplomate structure his continuing education program?

The position adopted was to permit the failing diplomate to take the recertification examination an unlimited number of times, so long as continuing education requirements are met, legal requirements are satisfied and the examination fee of $150 paid.

The Board reasserted its frustration with the LCGME's policy of maintaining secrecy on approval of family practice residency programs until formal approval has been granted by that body. This could and has been months after approval by the Residency Review Committee and can effectively hinder obtaining of funding and recruitment of residents.

Medical Meetings

The following is a partial list of national, state and district medical meetings scheduled in the coming months.

1976

March 3-6—Neurosurgical Soc. of Am., Marco Island, Fla.

March 5-6—First Annual Conf., W. Va. Mental Health Foundation, Charleston.

March 5-10—Am. Acad. of Allergy, San Juan, P. R.

March 12-13—Renal Symposium (Charleston Division, WVU Medical Center; and CAMC), South Charleston.

March 17-20—AMA Regional Meeting, Lexington, Ky.

March 29-April 2—Am. College of Radiology, Washington, D. C.

April 1-2—W. Va. Chap., Am. Acad. of Pediatrics, Beckley.

April 5-8—Am. College of Physicians, Philadelphia.

April 9-11—W. Va. Chapter, AAFP, Charleston.

April 10-12—AMA-AMPAC Workshop, Washington, D. C.

April 25-28—W. Va. Academy of Ophth. & Otol., White Sulphur Springs.

April 26-29—Am. College of Surgeons, Boston.

April 28-30—Medical & Chirurgical Faculty of the State of Md.

April 28-May 1—W. Va. Chapter, ACS, White Sulphur Springs.

April 29-May 2—ASIM, Atlanta.

May 1-2—W. Va. Assn. of Pathologists, Morgantown.

May 9-12—Am. Assn. of Plastic Surgeons, Atlanta.

May 10-13—Am. College of Obstetricians & Gynecologists, Dallas.

May 14-17—Am. Ophthalmological Soc., Kamuela, Hawaii.

May 22-27—Am. Gastroenterological Assn., Miami Beach, Fla.

May 25-29—Am. Gynecological Soc., Hot Springs, Va.

May 27-29—Am. Cancer Society, National Conf. on Radiation Oncology, San Francisco.

June 14-16—Am. Neurological Assn., San Francisco.

June 19—W. Va. State Society of Anesthesiologists, Morgantown.

June 26-July 1—AMA Annual Meeting, Dallas.

Aug. 18-21—109th Annual Meeting, W. Va. State Medical Assn., White Sulphur Springs.

The West Virginia Medical Journal

Vol. 72, No. 4 April, 1976

Aorta-Coronary Bypass Surgery

Dilip K. Basu, M. D.; James H. Walker, M. D.; And Mitsuru Nakatsuka, M. D.

It is believed that coronary heart disease is now the cause of more than 50 per cent of the deaths of males over the age of 40 in the United States. The National Health Examination Survey of 1960-62 estimated that five million American adults between 18 and 79 years of age had either definite or suspected coronary heart disease. In view of the epidemic proportions of coronary heart disease in the United States and the complex and equivocal debate concerning medical management and "risk factors," it is not surprising that the promising initial results with coronary artery bypass procedures should have rapidly made this operation widely popular as a satisfying direct approach to ischemic heart disease.

Introduced by Garrett[1] in 1964 and Kahn[2] in 1966, the saphenous vein bypass was further developed and popularized in the late 1960's by Effler[3] and Johnson.[4] Operative mortality, while variable, was generally observed to be acceptably low, and better than 80 per cent of the patients typically reported marked or complete remission of anginal pain.[5-13] By 1969, some 5,000 coronary revascularizations were being performed annually and the number has since grown rapidly.

Skeptics have been quick to point out that similar enthusiasm for internal mammary-ligation procedures in the 1950's subsequently required substantial qualification as the extent of the placebo effect in cardiac surgery was documented.[14-16] Conclusive resolution of this question will equire more extensive information on the natural history of medically and surgically treated patients from such large prospective studies as the Veterans Administration Cooperative Study of Surgery for Coronary Arterial Disease.

Indications for coronary artery bypass are, however, already based on a growing body of well-documented data for distinguishing between groups of patients with very different rates of surgical mortality and potential for symptomatic relief from surgical intervention. The surgeon and his patient can thus weigh the risk and potential benefits of surgery with new precision and evaluate them against increasingly precise knowledge of the natural history of atherosclerotic heart disease.

The Authors

- **Dilip K. Basu, M. D.; James H. Walker, M. D.; and Mitsuru Nakatsuka, M. D., Charleston Area Medical Center, Charleston, West Virginia.**

Coronary Arteriography and Its Risks

Any attempt to evaluate a patient's potential response to arterial bypass surgery must be based on accurate determination of the extent and location of coronary atherosclerotic involvement and left ventricular function. In practice, this means that definition of the coronary anatomy through the use of coronary arteriography and left ventriculography is essential. Unfortunately, as an intrusive diagnostic procedure, coronary arteriography has morbidity and mortality rates that must be taken into account before recommending it. The primary risks are formation of a thrombus, tearing of the intima, and damage to an atheromatous plaque. The most common complications thus include myocardial infarction, intractable arrhythmias, and extra-coronary embolic complications such as stroke or vascular occlusion of extremities. Mortality rates of from 0.1 per cent to 4 per cent and higher have been reported, while the rate of serious complications appears to be between two and six per cent.[18]

Greater experience with coronary arteriography may contribute significantly to its safety. Data has been published indicating that the

mortality rate in centers where more than 200 arteriograms are performed annually is appreciably lower than that observed in facilities with a much smaller volume.[18] It has also been reported that the Sones brachial technique is safer than the Judkins femoral procedure,[19] although it is not clear whether this reflects a different response to the quite different catheters, some aspect of the technique itself, or the routine use of systemic heparinization with the Sones procedure.

A third major factor affecting the risk of coronary arteriography is severity and distribution of atheroslerotic disease. Risk is appreciably higher in patients with extensive three-vessel disease and especially in those with substantial narrowing of the main left coronary artery.[20] Kemp[21] has identified as an extremely high-risk patient group those with complete obstruction of the right coronary artery and severe stenosis of the main left coronary artery. Such patients frequently exhibit dyspnea with the anginal syndrome and show ST depression on exercise test. Risk may also be greater for patients with congestive heart failure, unstable angina, or Class IV angina.

Risk associated with coronary arteriography appears to be somewhat greater for patients with chronic congestive heart failure accompanied by ventricular aneurysm, but again the prognosis with medical management alone is not sufficiently good to preclude invasive diagnostic procedures. Similarly, we have noted that cardiac emergencies may constitute acceptable applications of coronary arteriography, despite a substantially increased risk, if the prognosis is sufficiently poor in the absence of surgical intervention for which definition of coronary anatomy is required. Since recent surgical advances have increased the probability of successful surgical intervention in a variety of acute coronary emergencies, such relatively high risk arteriography will necessarily become increasingly common.

On the other hand, it should be pointed out that fatal complications can occur in patients with no demonstrable significant cardiac disease and that arteriography has been performed uneventfully on patients in the early stages of acute myocardial infarction and even in cardiogenic shock.[17] In the latter cases it is obvious that the need for prompt diagnostic information and the poor prognosis of the patient may outweigh the somewhat increased risk associated with arteriography under these conditions. In most experienced facilities it is probably reasonable to expect a surgical mortality rate not much below 10 per cent, especially now that a greater number of patients with more severe disease are being examined in preparation for bypass surgery.

A mortality rate of this order clearly precludes the use of coronary arteriography as a general screening technique for the detection of atherosclerosis. On the basis of data from the Framingham Study, it has been estimated that only one per cent of the male population, between the ages of 45 and 54, with asymptomatic coronary atherosclerosis proceeds annually to symptomatic ischemic heart disease; of this one per cent, only a fifth die suddenly without previous evidence of either infarction or angina.[22]

For the present, coronary arteriography should thus be restricted primarily to situations in which such detailed knowledge of the coronary anatomy is required for medical management or surgical intervention. Its purely diagnostic use should therefore be chiefly in cases in which a diagnosis of coronary heart disease (CHD) is suspected but cannot be determined in any other way and where recognition of CHD may be expected to facilitate management: *e.g.*, patients with atypical chest pain or abnormal cardiograms who are young and have a family history of angina, early death from CHD, or hereditary lipid abnormalities.

Similar reasons for suspecting atherosclerotic heart disease may also justify arteriography in patients with heart failure or cardiomegaly. Patients whose occupation makes them responsible for the lives of others (such as airline pilots) are perhaps a special class of patient in whom any evidence of coronary heart disease should be verified by all reasonable means. Arteriography may also be used postoperatively if it can be expected to contribute to an accurate prognosis or serve as an indication for further surgical intervention.

Patients awaiting cardiac surgery are commonly subjected to coronary arteriography primarily on the basis of being in the coronary-prone age group with serious cardiac symptomatology. The wisdom of this practice is debatable, and it would appear more rational to reserve arteriography for those patients in whom other evidence clearly suggests ischemic heart disease and/or coronary insufficiency. Coronary arteriography is clearly justified in patients considered for surgery because medical management has failed to provide adequate relief or when the prognosis with medical management alone is poor. Patients with intractable and disabling angina are candidates for arteriography if bypass surgery is under consideration, but there is no reason to subject to this diagnostic procedure patients who exhibit only exertional an-

gina that is easily controlled by nitroglycerin or reduction of activity. It may be noted that the definition of "disabling" is in part subjective and depends on the level of activity that the patient finds indispensable. A young man with family and professional obligations might well consider any substantial curtailment of his activity "disabling."

Patients with angina at rest, unstable angina, and other indications of accelerated coronary artery disease, of course, represent a much higher risk group than do patients with stable angina, and so may be candidates for arteriography and surgery without disabling symptoms. Included in this class are young patients with two or three proven myocardial infarctions in rapid succession. At the present time, arteriography is not indicated for patients who are recovering uneventfully from an initial, uncomplicated myocardial infarction, especially if the patient is without a previous history of exertional angina.[17] Coronary arteriography is at present most frequently used as part of the determination of the desirability of coronary artery bypass surgery. Like the selection of patients for arteriography, candidates for bypass procedure should be identified on the basis of carefully weighing the surgical risk versus potential benefit against a background of the natural course of the untreated condition.

Bypass surgery is, of course, considerably more hazardous than is coronary arteriography. Surgical mortality rates from two to 20 per cent have been reported for bypass procedures with a typical rate between five and seven per cent.[5-7,9,10,13,23,26] Fortunately, coronary arteriography and other diagnostic procedures have now made it possible to distinguish between patients of high and low risk, and to determine with some reliability which patients are most likely to be benefited by surgery.

Stable Angina

The primary indication for coronary artery bypass surgery at present is the relief of intractable and disabling angina pectoris. A substantial number of trials have established that significant relief of anginal pain may be expected in 80 to 90 per cent of all patients undergoing these procedures, and complete remission may be expected in 60 to 70 per cent.[2,5,6,27-32] Objective improvement in exercise capacity has been shown to occur in from 64 to 86 per cent of patients receiving bypasses.[27,28,33-36] The degree of improvement correlates well with graft patency as demonstrated by coronary arteriography.[5,31,37,38] Improvement in ventricular function has also been reported after bypass surgery, but other investigators have failed to observe any change and some have reported a decrease of function.[34,39-47]

Factors affecting anticipated benefits of surgery: The potential benefit of coronary artery bypass must be individually assessed for each patient. In the first place coronary arteriography must verify that the patient presenting with anginal symptoms really has coronary atherosclerosis. In one study, strong indications of atherosclerosis proved unfounded in 20 per cent of the patients examined.[48]

The lumen of an affected artery should be reduced at least 70 per cent, and the stenosis should be located in the proximal two-thirds of the artery to permit placement of a bypass distal to the narrowing. Bypass grafts to distal arteries less than 1.5mm. in diameter have rarely been successful, presumably because the patency rate in smaller vessels is markedly lower.[49-51] Sixty-five to 80 per cent of saphenous vein bypass grafts are patent 12 months after the operation.[27,37,50,52] There is evidence that patency decreases much less rapidly subsequently, with perhaps a further decrease of only 6 per cent in the next two years.[52] It may be noted in this connection that patency rate correlates well with graft flow measured at the time of surgery: flow less than 22 cc./min. is associated with a very low patency rate, and flow greater than 40 cc./min. is usually desirable.[49,50] Graft flow is, of course, a basic measure of the overall utility of the graft so that measurement at the time of operation can also be of value when considering the advisability of another operation in the case of graft failure. Distal arteries with diffuse atherosclerotic involvement can also limit the changes for successful bypass because they typically have poor run-off and present technical obstacles to anastomoses.

No significant improvement can be expected from a technically successful graft if the area of the myocardium that it supplies is akinetic or infarcted; and, unfortunately, adequate tests to differentiate such tissue from ischemic but viable myocardium are lacking. Clinical success appears to be closely related to the degree of necessary revascularization that is surgically possible with the patient's specific coronary anatomy. If not all arteries with significant obstruction are suitable for revascularization, chances of significant relief of symptoms are reduced and mortality may be increased. Achieving complete revascularization with the use of multiple grafts may thus be more important than worrying about the pump time.

Factors affecting surgical risk: Determination of the likelihood that the patient will benefit from a bypass procedure must be compared with his specific surgical risk. By far the most important determinant of surgical mortality appears to be left ventricular function.[29,53,54] An ejection fraction greater than 40 per cent is associated with a surgical mortality in the neighborhood of three per cent, while an ejection fraction under 20 per cent is associated with a mortality rate near 30 per cent.[55] At high risk is any patient whose myocardium does not show at least 20 per cent motion during systole on at least two surfaces.[56] The previously mentioned reports of improvement in left ventricular function after bypass surgery would seem to present a therapeutic dilemma: but these results have not been consistently reproduced, and in view of the very clear risk associated with poor function, bypass procedures are not recommended for patients with congestive heart failure alone. Bypass procedures have, however, been reported to improve ventricular function in certain patients with angina as well as congestive heart failure.[57] Previous infarction, valvular heart disease and ventricular aneurysm may all seriously increase the risk of bypass procedures.

The general factors of pulmonary function, renal function, and both the presence and degree of hypertension must be carefully considered in evaluating operative risk. Cardiopulmonary bypass is especially dangerous in patients with a history of cerebral vascular insufficiency. Age alone does not appear to be a major factor in arterial bypass operative mortality, but heavy smoking may be assumed to increase both mortality and morbidity.

Consideration of surgical risk should not be confined to operative mortality. Acute myocardial infarction, the chief cause of operative mortality, has been electrocardiographically detected in between two and 22 per cent of all patients during the perioperative period, but few of these have proved fatal.[5,13,58-62] Isoenzymatic evidence of myocardial cell injury subsequent to coronary arterial bypass was reported in 80 per cent of one series of patients,[63] but similar rates have been reported with quite different cardiac operations and may be a consequence of present methods of cardiopulmonary bypass.[37] One study of postoperative mortality with saphenous vein bypass procedures showed a four per cent incidence of thrombophlebitis and a seven per cent incidence of pulmonary embolism.[5] Such rates would presumably be lower with anticoagulation therapy. Postoperative ventricular or supraventricular arrhythmias generally have responded to therapy.[23]

To reduce operative and early postoperative risk to the minimum in high risk patients, the authors employ the following basic technique:

(1) initiation of cardiopulmonary bypass standby.

(2) light anesthesia.

(3) Femoral vessel exposure and preparation of saphenous vein. The lower leg will generally provide vessels with the appropriate diameter (four to five mm.) to minimize discrepancy with the coronary arteries. The vein should remain *in situ* until required, and every effort should be made to avoid trauma during its preparation and handling.

(4) cardiopulmonary bypass using single venous cannula and moderate (32°C) hypothermia.

(5) ventricular fibrillation.

(6) left ventricular decompression through the right superior pulmonary vein to avoid injury to the myocardium.

(7) distal coronary anastomosis with local occlusion of the site of coronary arteries.

(8) partial clamp of ascending thoracic aorta.

(9) proximal anastomosis using 5-0 Tycron sutures.

(10) warming to 35°C.

Postoperatively, Coumadin may be of benefit for some patients to reduce the incidence of problems related to removal of the saphenous vein and minimize the chance of thrombosis in the bypass.

Natural history of conorary artery disease: Ideally, the likelihood of benefit to the specific patient together with his surgical risk should be evaluated against the best available estimates of his prognosis without surgery before a decision on the desirability of arterial bypass can be made. Unfortunately, our knowledge of the natural history of coronary artery disease in different kinds of patients is far from complete, while only very tentative information is thus far available on the effect of coronary artery bypass procedures on long term mortality and infarction rates. Nonetheless, a number of valuable distinctions can be made at the present time.

The annual mortality rate of all patients with stable angina is generally recognized to be about four per cent.[64,65] Blood pressure and electrocardiographic abnormalities alone permit the separation of high risk (eight per cent annual mortality) from low risk (two per cent mortality)

patients.[64] The use of coronary arteriography, however, permits more precise estimate of risk. Mortality rates have generally been shown to increase sharply with the number of vessels showing more than 50 per cent narrowing[66-69] and the extent of damage to the left ventricular myocardium.[66-71] Oberman has emphasized that the mortality rate for patients with only one significantly narrowed vessel and no indication of congestive heart failure (CHF) is very close to that of subjects with no significant atherosclerotic stenosis, while patients with two or more severely narrowed vessels as well as CHF appear to have a mortality rate that is 10 to 20 times higher.[37] In a recent study combining data from coronary arteriography and left ventriculography, the total attrition after three years of medical treatment was less than ten per cent among the patients with one-vessel involvement versus more than 40 per cent of the patients with either three-vessel involvement or obstruction of the left main coronary artery.[70,71]

Data such as these will become prime factors in the selection of candidates for bypass surgery once the effect of such procedures upon long-term mortality and morbidity has been determined. Initial results appear promising. Attrition rates near four per cent have been reported in two separate series of patients followed for 30 and for 60 months after bypass operations[8,30] This rate appears superior to those reported for medically treated patients with comparable severity of atherosclerotic involvement, *i.e.*, seven to 15 per cent or higher.[37,66-68] The degree to which patients in separate studies are strictly comparable is, of course, extremely difficult to determine.

Discussion

At the present time, there remains considerable opportunity for legitimate differences between conservative and aggressive surgical approaches to coronary artery bypass. Most surgeons would agree that a patient with disabling and intractable angina might be a candidate for surgery if coronary arteriography shows severe proximal narrowing in more than one major artery having suitable distal section and if there is no evidence of severe left ventricular failure. His chances of survival and significant relief would both be great. As we have seen, however, the risk of surgery and the likelihood of benefit can vary widely with a variety of independent factors. Among the major deciding factors should certainly be the patient's own evaluation of the tolerability of his anginal condition. If he finds it sufficiently incapacitating, he may request surgery even with the full knowledge that his chances of either survival and/or significant relief are less than favorable.

If the patient does not have strictly disabling angina, many surgeons would decide whether to recommend bypass surgery on the basis of coronary arteriography. Perhaps the majority of surgeons would today recommend the operation if two or more major coronary arteries showed near complete obstruction. Even a 99 per cent stenosis of a single artery, however, would leave many unconvinced that surgery was really indicated. In the case of a patient with severe stenosis of one artery, some surgeons might recommend bypass if the EKG were sharply positive with the exercise tolerance test, while others would do so only if the artery in question were the left anterior descending, reasoning that an infarction caused by stenosis here would be likely to lead to a greater loss of ventricular function. Isolated left main stenosis has also been observed to be associated with a more rapid progression of symptoms than is the case with lesions elsewhere.

It should be clear that the physician should make every effort to provide the patient with a realistic assessment of the potential risks and benefits of bypass surgery relative to his specific prognosis so that he may make an informed decision.

Unstable Angina

Patients with unstable angina, or "preinfarction angina" as it is often called, may be considered candidates for coronary artery bypass without severely disabling angina because of the relatively poor prognosis associated with this diagnosis. Even with optimal management, annual mortality rates of 15 to 30 per cent have been consistently reported, with some much higher estimates.[72-75]

It must be emphasized that despite the popular term "preinfarction angina," by no means do all patients with this syndrome proceed to infarction, and not all infarctions are preceded by such prodromata. A variety of phenomena are covered by the term unstable angina. A general distinction can be made between patients with crescendo angina and those characterized by the sudden appearance of rest angina or nocturnal angina. In the crescendo pattern, a patient with stable angina suddenly experiences an increased frequency of attacks or a lower exertion threshold, often with greater severity or duration of pain. Continued-rest angina also usually appears in patients with previously stable angina, but it may appear as the first symptom of ischemic heart disease. It has been associated with a very high mortality rate, approximately 40 per cent.[72] Patients with both crescendo and rest angina

are certainly a very poor risk group. In true unstable angina the electrocardiogram shows no new Q waves, although ST segment shift or T wave inversion may be associated with anginal episodes (no elevation of serum ISO-enzymes suggesting myocardial injury).

The possibility that the bypass procedure might reduce mortality and infarction rate is clearly a much more compelling justification for surgery in these patients than it is in patients with unstable angina, whose *overall* annual mortality rate is approximately four per cent. Initial trials have also been encouraging, reporting mortality and infarction rates below those estimated for comparable populations managed without surgery.[9,10,76,77] Immediate relief of anginal pain was reported in 75 to 90 per cent of the patients receiving bypasses, and left ventricular function was improved in some cases.

Factors determining the likelihood of significant relief of angina and the extent of surgical risk are essentially the same as those discussed with regard to stable angina. Surgical mortality is, however, at present considerably higher in patients with unstable angina, *i.e.*, close to eight to ten per cent. This figure may, however, reflect merely the fact that patients with unstable angina are likely to have greater atherosclerotic involvement than the customary series of bypass patients, as well as a greater risk of myocardial infarction in the immediate perioperative period. Patients with unstable angina are also much more likely to be recommended for surgery despite increased risk factors. To minimize risk during surgery it is especially important to avoid prolonged cross-clamping and ventricular distention, and to revascularize all ischemic areas completely when possible.

Surgeons with extensive experience with unstable angina seem to agree that coronary artery bypass can offer many patients reduced mortality and appreciably enhanced quality of life with an acceptable surgical risk.

Chronic Congestive Heart Failure with Ventricular Aneurysm Secondary to Atherosclerotic Heart Disease

While the natural history of asymptomatic patients with ventricular aneurysm is not well known, and cineangiographic evidence has been presented indicating an incidence of some type of aneurysm after myocardial infarction as high as 25 per cent,[78] it is well established that patients with intractable chronic congestive heart failure and left ventricular aneurysm have an extremely high mortality rate (88 per cent within five years).[79] Fortunately, recently developed techniques such as intra-aortic balloon counterpulsation, have permitted surgical resection of many aneurysms with an acceptable operative mortality and markedly enhanced follow-up survival.[81-83] As might be expected, more than half of such patients are also candidates for revascularization procedures,[81] and the knowledge that surgery is indicated for aneurysm resection can often provide the opportunity for needed revascularization that might otherwise not be attempted.

Acute Mitral Insufficiency

In the hope of reducing postoperative incidence of infarction and improving long-term mortality, bypass procedures are, today, frequently employed in patients scheduled for valve replacement when angina and significant stenosis are both present. Good success and relatively low operative mortality (*i.e.*, ten per cent) have been reported for the combination of revascularization and mitral valve replacement when the latter procedure was indicated because of valvular disease.[84-86]

Mortaility is of course much higher in cases where valve replacement is necessitated by rupture of the papillary muscles secondary to myocardial infarction. Since fully 70 per cent of these patients die within 24 hours without surgery, however, the risk is generally justified if sufficient viable myocardium appears to remain. The simultaneous establishment of arterial bypasses where necessary is properly considered an important part of this emergency procedure.

Summary

Although it is difficult to predict with confidence all the specific patterns of chronic ischemic disease and acute cardiac emergencies that will constitute indications for revascularization techniques 10 years from now, and many questions remain to be answered about the long-term results of such procedures, it is clear that, today, the cardiac surgeon has at his disposal increasingly precise information on the likelihood of benefit and risk that this promising technique has for each of his patients suffering from coronary artery disease. The near future will certainly see the refinement and modification of many of the indications discussed here, but the wide utility of the coronary artery bypass is already widely recognized.

The lengthy list of references may be obtained by writing The Journal.

Pregnancy In Diabetic Women: Review Of Five Years' Experience At The Sacramento Medical Center

Narinder N. Sehgal, M. D.

Summary

CHARTS of mothers and babies of 71 gestational diabetics and 20 overt diabetics treated at the Sacramento Medical Center over a five-year period were reviewed. Prenatal patients with suspected clinical criteria were investigated with oral glucose tolerance tests. During this review, the following were some of the more general results noted:

(1) Gestational diabetic patients as a group were younger and of lower parity than overt diabetics.

(2) Family history for diabetics was negative in 45 per cent of gestational diabetics and 35 per cent of overt diabetics.

(3) The incidence of newborns weighing 4,000 gms. or more was 25.4 per cent in gestational diabetics and 20 per cent in overt diabetics.

(4) Pitocin was used for induction or augmentation in 54.9 per cent of gestational diabetics and 40 per cent of overt diabetics. Fifty-five per cent of the newborns of overt diabetics and 1.4 per cent of the newborn of gestational diabetics were preterm (under 38 weeks).

(5) The incidence of respiratory distress syndrome (RDS) and small size for gestational age was five per cent in overt diabetics.

(6) Perinatal mortality was ten per cent in overt diabetics and none in gestational diabetics.

Some interesting case histories are presented. Present trends in the management of gestational and overt diabetic pregnant patients are described.

The Author

- **Narinder N. Sehgal, M. D., Department of Obstetrics and Gynecology, Charleston Division, West Virginia University Medical Center; formerly from the Department of Obstetrics and Gynecology, UCD - Sacramento Medical Center and Kaiser Foundation Hospital, Sacramento, California.**

Introduction

Various authors have suggested different criteria for the diagnosis of gestational diabetes. O'Sullivan and Mahan's[1] criteria for diagnosis of gestational diabetes are most widely accepted at present. Obviously, it is important to have standard diagnostic criteria for valid statistical comparison.

Recently, management of gestational and overt diabetic pregnant patients has undergone modification. In the past, Pedowitz and Schlevin,[2] and Miller, *et al*[3] have suggested that the prediabetics have the same or higher perinatal mortality than overt diabetics. More recent observations, however, suggest that with vigorous screening of the prenatal population for gestational diabetics, close supervision and management by a team of obstetricians and internists, and close monitoring of the fetal well-being by the recently developed biochemical and biophysical methods, perinatal mortality can be reduced to that present in the general prenatal population.[4,5,6,7,8]

The purpose of this review was to determine perinatal mortality and maternal morbidity in gestational and overt diabetic patients at the Sacramento Medical Center, where these patients were cared for in a high-risk obstetric clinic by the resident staff under the supervision of a team of full-time staff. Perinatal mortality in overt diabetic patients treated at Sacramento Medical Center was compared with that of similar patients treated at a local community hospital.

Material and Method

Charts were reviewed of all pregnant diabetic patients who delivered at the Sacramento Medical Center between January, 1968 and February, 1973, and who carried the pregnancy to 28 weeks or beyond. A total of 139 pregnant patients were diagnosed as having either overt or gestational diabetes. O'Sullivan and Mahan's[1] criteria for diagnosis of gestational diabetes after a standard oral glucose tolerance test (OGTT) were used (Table 1). Using this standard, 48 charts did not meet the criteria for diagnosis of gestational diabetes. This left a total of 71 gestational and 20 overt diabetes patients. The total number of deliveries during the period of the review were 4,511.

TABLE 1

O'Sullivan and Mahan's[1] Criteria for Diagnosis Of Gestational Diabetes

FBS	90 mg. %
1 H	165 mg. %
2 H	145 mg. %
3 H	125 mg. %

A standard 100 gm. glucose load OGTT is given, and whole blood glucose is measured by auto analyzer (Hoffman). Gestational diabetes is diagnosed if two or more values are equal to or exceed the specified values.

Prenatal patients were investigated for diabetes if the following clinical criteria were present: obesity, hydramnios, family history of diabetes, past obstetrical history of unexplained stillbirths, neonatal deaths, premature births, congenital anomalies, glucosuria and babies weighing nine pounds or more.

Results

Eighty per cent of the overt diabetics were in White's Class B or C. Gestational diabetic patients as a group were younger and of lower parity than overt diabetics. Most patients in both groups were seen in the second or third trimester. Seven per cent of the gestational diabetics and 25 per cent of the overt diabetics had poor past obstetrical history—stillbirths, neonatal deaths, hypertension, prematurity, congenital anomalies, etc.

The family history for diabetes was negative in 45 per cent of the gestational diabetics and 35 per cent of the overt diabetics. Obesity, being one of the criterion, was more common in both groups. In the gestational diabetes, 56.4 per cent weighed more than 175 pounds and 77.8 per cent of the newborns weighing more than 4,000 gms. were born to these mothers. Fourteen per cent of the gestational diabetics and 30 per cent of the overt diabetics showed hypertension during pregnancy. Prenatally, glucosuria was detected in 19.7 per cent of the gestational diabetics. Pitocin was used for induction or augmentation of labor in 54.9 per cent of the gestational diabetics and 40 per cent of the overt diabetics. The cesarean section rate was 11.3 per cent in gestational diabetics and 40 per cent in overt diabetics.

TABLE 2

S M C Cesarean Section Rate

1968	4%
1969	5%
1970	6%
1971	5%
1972	10%
1973	9%

The overall cesarean section rate during the period of review is shown in Table 2.

There was no significant difference in the postpartum complications in the two groups. The incidence of newborns weighing 4,000 gms. or more was 25.4 per cent in gestational diabetics and 20 per cent in overt diabetics. The overall incidence of large babies (> 4,000 gms.), at the Sacramento Medical Center is five per cent. Fifty-five per cent of the newborns of overt diabetics and 1.4 per cent of those of gestational diabetics were preterm (under 38 weeks). Five per cent of the newborns of overt diabetics were small for gestational age. There were no small-for-gestational-age babies in the gestational diabetes group.

The incidence of hyperbilirubinemia and hypoglycemia in the newborns was higher in the overt diabetics. One newborn in the gestational diabetes group had hydrocele; in the overt diabetes group, one newborn was anencephalic and one had Down's Syndrome. There were no maternal deaths. No perinatal deaths occurred in the gestational diabetes group. There were two perinatal deaths in the overt diabetic patients: one was anencephalic and the other was stillborn (one pound, 9 ounces) in a juvenile diabetic, first seen in the emergency room in a diabetic coma.

Some Interesting Case Histories

Case 1: Presenting was a 24-year-old white female, G 1, P 0, an insulin-dependent diabetic since the age of eight. She was first examined in the prenatal clinic on November 29, 1971. Her last menstrual period (LMP) was on October 12, 1971; her expected date of confinement (EDC) was July 19, 1972. Several previous admissions for control of diabetes and treatment of ketoacidosis were recorded. The patient was readmitted on February 24, 1972, with a diagnosis of diabetic acidosis and an intrauterine pregnancy of five months; and, after treatment, she was discharged on February 28, 1972. Readmitted on April 24, 1972, with a diagnosis of diabetic acidosis and intrauterine pregnancy, she was again treated and discharged on April 28, 1972. This same situation occurred on May 15, 1972 and, again, she was placed in consultation with an internist. Control of her diabetes was attempted by adjusting the insulin dose. She received several doses of Hygroton and Lasix also during that admission. Several 24-hour urine estrogens (mg. Estrogen/gm. Creatinine—E/C) were done (Figure 1).

Amniocentesis performed on May 29, 1972, showed creatinine 1.7 mg. per cent; bilirubin 0.0 mg. per cent; and orange staining cells 1.3 mg.

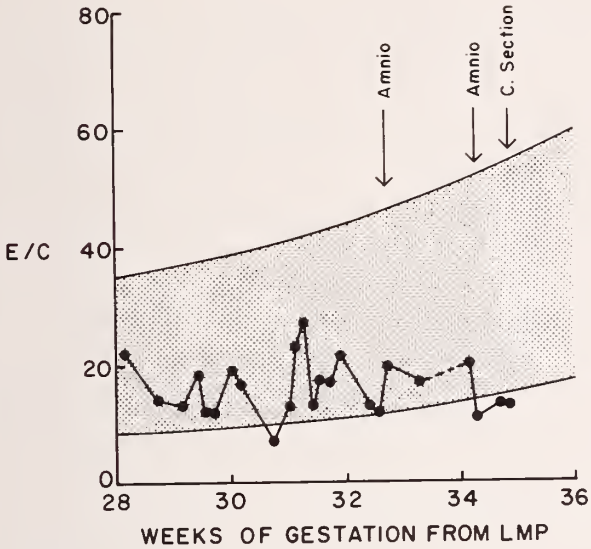


Figure 1. Case 1: Twenty-four hour urine estrogen (mg. Estrogen/gm. Creatinine-E/C) are low and without an upward trend. Dotted area shows normal range at the Sacramento clinical laboratory. Cesarean section was done on June 13, 1972, due to "falling estriol." A nine-pound infant was delivered with difficulty. Infant died of hyaline membrane disease.

per cent. Performed again on June 9, 1972, the results showed creatinine 1.8 mg. per cent; bilirubin 0.1 mg. per cent; and orange staining cells 2.0 per cent; L/S 2:1.

A cesarean section was done on June 13, 1972, due to the falling estriol. A nine-pound male infant was delivered at 11:09 A.M. The pediatrician's note, who was present in the delivery room, indicated "Difficult forceps delivery of a large head. There was a small laceration (0.6 cm.) on [the] left side of [the] forehead, large quantity of fluid was aspirated from the nostrils and stomach, infant was quite cyanotic, gradually picked up with supplementary oxygen." At 11:45 A.M., respiration was 108 per minute, and the infant died at 6:05 P.M. Apparently, short Dee-Lee forceps for cesarean section were used to deliver the fetal head through the uterine incision.

The autopsy diagnosis revealed Hyaline membrane disease. No gestational age was given. Vernix was present on the skin.

The same patient was seen for her second pregnancy on December 5, 1973; her LMP was on September 10, 1973, and EDC, June 17, 1974. She was on 40 units NPH insulin on February 26, 1974. She was taking 48 u NPH on March 13, 1974, 52 u NPH on March 26, 1974; her blood sugar was 320 mg. per cent at 4 P.M.; and on March 27, 1974, she was spilling acetone in urine. She was admitted on March 28, 1974, with a diagnosis of diabetic acidosis and discharged on April 2, 1974. On April 9, 1974, she was on 40 u NPH. She was admitted again on April 14, 1974, with a diagnosis of gastroenteritis and ketosis. She was discharged on April 18, 1974. Serial 24-hour urine estrogens were done (Figure 2). She was admitted again on April 20, 1974. Amniocentesis, done on May 23, 1974, showed L/S 2.4, creatinine 2.4 mg. per cent, and bilirubin 0.1 mg. A cesarean section was performed on May 31, 1974, and a stillborn term fetus was delivered.

Discussion of Case 1: Whitfield, *et al*[9] have described the development of RDS in an infant of a diabetic mother, following severe birth asphyxia, even though predelivery L/S in the amniotic fluid was 3.3. Similar experience has been described by others.

It seems that infants born with rhesus incompatibility[9] and those born of diabetic mothers may develop RDS even though the predelivery L/S is two or greater if there is hypoxia or acidosis during delivery. Diabetic control in this patient was poor. She had several episodes of diabetic acidosis which is associated with high perinatal mortality. Twenty-four hour urine estrogens were low during the first pregnancy. During her second pregnancy, diabetic control again was poor with spells of diabetic acidosis.

Amniocentesis on May 23, 1974, indicated mature values of L/S and creatinine; and 24-hour urine estrogens began to show a downward trend about May 24. There was a steep drop on

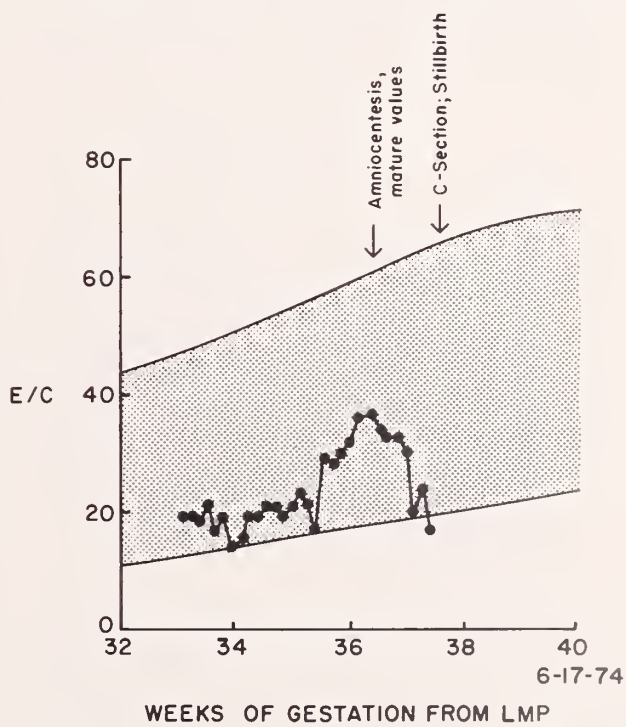


Figure 2. Case 1: In her second pregnancy. Twenty-four hour urine estrogen (E/C) showed progressive decline after May 24. Amniocentesis done on May 23 showed mature values. A stillborn term fetus was delivered on May 31 by repeat cesarean section.

May 28, 1974. These changes apparently were not appreciated. A stillborn fetus was delivered on May 31, 1974, with congenital anomaly of the external ears and corneal opacities.

Case 2: Presenting was a 21-year-old white female, G 1, P 1, an insulin-dependent juvenile diabetic. Her LMP dates were not certain. She was having irregular periods; however, the LMP given was July 10, 1972, with a probable EDC in mid-April or mid-May. She was first seen in the OB clinic on November 17, 1972. Her uterus was described as 10 to 12 weeks' size, with her weight listed as 182 pounds and her blood pressure at 130/70.

Fetal movements were noted by her physician on January 10, 1973. On April 10, 1973, she was admitted with a diagnosis of preeclampsia. Her weight was 203 pounds, blood pressure 148/98, one plus proteinuria. On April 15, 1973, amniocentesis was done which showed L/S > 2, creatinine 1.3 mg. per cent, bilirubin 0.3 mg. per cent, nile blue stain cells less than one per cent. Serial 24-hour urine estrogens were done (Figure 3). On April 23, 1973, amniocentesis was repeated showing L/S > 2, creatinine 2.6 mg. per cent, bilirubin 0.1 mg. per cent, and nile blue stain cells five per cent. An oxytocin challenge test (OCT) was done on April 21 and April 27, but was unsatisfactory. On April 29, her blood pressure was 140/100, two plus proteinuria, and polyhydramnois. On May 1, 1974, fetal heart tones (FHT) were not heard. On May 3, the patient delivered a stillborn term female infant.

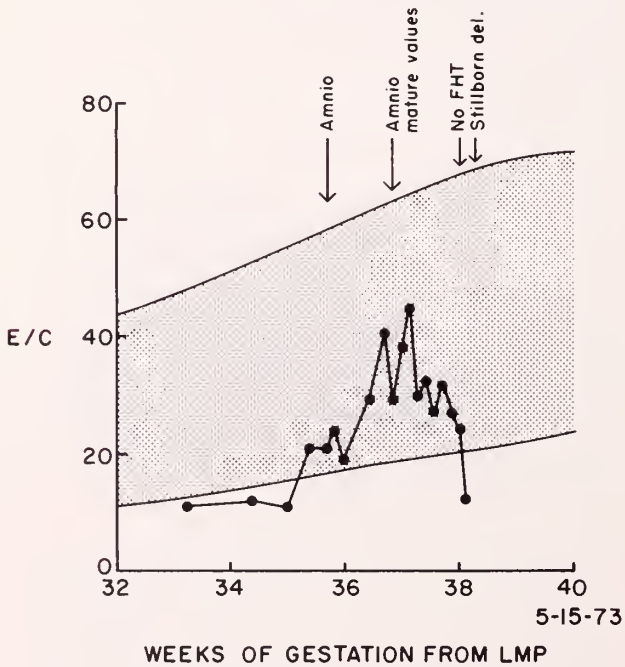


Figure 3. Case 2: Twenty-four hour urine estrogen (E/C) showed downward slope from April 25. Amniocentesis done on April 23 showed mature values. Fetal heart rate disappeared on May 1. On May 3, patient delivered a stillborn term infant.

Discussion of Case 2: The incidence of preeclampsia in diabetes is about 25 per cent. She was admitted for the first time during this pregnancy with signs of preeclampsia on April 10. Amniocentesis, on April 23, indicated mature values of L/S and creatinine. Her preeclampsia worsened on April 29. Fetal heart rate disappeared on May 1. Twenty-four hour urine estrogen showed a downward slope from April 25. A stillborn term fetus (3,080 gms.) was delivered vaginally. Perhaps a live baby would have resulted if she had delivered soon after April 23.

Case 3: Presenting was a 19-year-old white female, G1, P0; LMP, 9-22-73; EDC, 6-29-74, an insulin-dependent juvenile diabetic. She had been followed in the prenatal clinic and was admitted on May 17, 1974 for evaluation of her diabetic control. On May 27, amniocentesis showed L/S 2.3, creatinine 1.4 mg. per cent, bilirubin 0.1 mg. On May 29, condyloma acuminata of the vulva-vagina, covering a large area, was treated with podophyllin. She was also started on oral flagyl and vaginal mycostatin suppositories. The cervical-vaginal culture was negative for gonococcus. Her diabetes was under fair to good control. An OCT done on May 31 was not satisfactory, but a repeat OCT on June 6 was negative. Amniocentesis done on June 11, 1974, showed L/S 3.6, creatinine 1.9 mg. per cent, and orange stained cells 5.4 per cent. Serial 24-hour urine estrogen determinations were done (Figure 4). Pitocin induction with fetal monitoring was attempted on June 12 and June 13 without success. On June 14, a cesarean section was performed and a live, term male infant weighing eight pounds, two ounces was delivered. The infant did well in the nursery.

Discussion of Case 3: Diabetic control was fair to good in this patient. A drop in 24-hour urine estrogens, on May 31 and June 1, was probably related to urine output and multiple drugs (Ampicillin, Flagyl, Mycostatin and Demerol) she was taking due to the infected condyloma acuminata, vaginal discharge and pain in the vulva. Amniocentesis, on June 11, showed mature values. After two days of unsuccessful pitocin induction, cesarean section was done on June 14 and a healthy, live baby was delivered.

Case 4: Presenting was a 22-year-old white female, G3, P0; Abortions 2, an insulin-dependent diabetic since age eight years. Referred from out of town for management and admitted

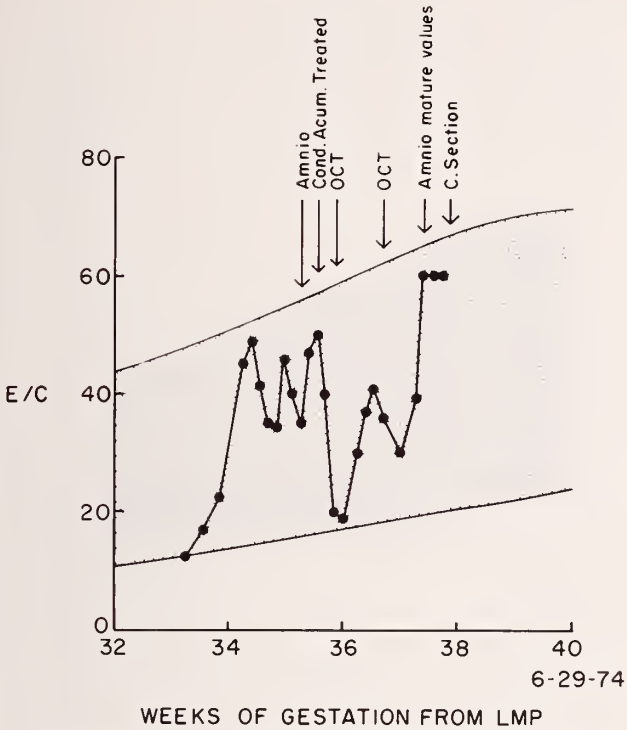


Figure 4. Case 3: Twenty-four hour urine estrogen (E/C) is high normal. Dips are probably related to multiple drug intake including ampicillin. Oxytocin challenge test was negative. Patient was delivered of a live infant by cesarean section.

on February 19, 1973, she recorded her LMP as August 3, 1972, and her EDC as May 10, 1973. She had had two spontaneous abortions at eight and ten weeks' gestation. She was hospitalized in September, 1972, in her home town with a diagnosis of diabetic ketoacidosis. Also in June, 1972, she was hospitalized with a diagnosis of ketoacidosis and bladder infection. Her diabetes was under poor control. On admission, she was taking 54 u Lente plus eight u regular in the morning, and ten u Lente plus 16 u regular in the evening. Her insulin dose and diet were adjusted and reasonably good control of blood sugars was obtained with about 90 u Lente insulin per day. Ophthalmoscopic examination, on April 3, showed diabetic retinopathy. Her blood pressure ranged from 130-150/80-90 with no proteinuria. CBC, BUN, and creatinine clearance were normal. Serial 24-hour urine estrogens were done (Figure 5). OCT's done on March 21 and 28, and April 4, 8, and 11, were negative. Amniocentesis done on April 9 showed L/S 2:1, creatinine 1.9 mg. per cent, fat cells five per cent, and bilirubin 0.0 mg. per cent. On April 13, an elective cesarean section was done and a live, male infant weighing 2,523 gms. was delivered. Bilateral tubal ligation was done. The infant did well in the nursery.

Discussion of Case 4: Her diabetes was brought under fair to good control. She was kept in the hospital until delivery and was followed closely with serial 24-hour urine estrogens and OCT's. It was recognized that her 24-hour urine estrogen values were low, but showed an upward trend. As soon as the amniotic fluid results indicated maturity, she was delivered with an elective cesarean section. Due to hypertension and diabetic retinopathy, she was advised to elect a tubal ligation, which was done at the time of cesarean section.

Discussion

Suspect clinical criteria used to screen prenatal patients for diabetes in this study have also been suggested by other authors.[6,7,10] O'Sullivan, *et al*[11] have shown that the sensitivity rate of routine prenatal screening blood sugar test was 79 per cent; however, if the screening blood sugar test is limited to subjects with one or more clinical criteria, the sensitivity rate drops to 53 per cent. In the 25 years or older age group, the rates were 88 per cent and 62 per cent, respectively. Screening blood sugar test was done by obtaining one-hour blood sugar after an oral 50 gm. glucose load. A value of 130 mg. per cent was considered significant. These patients were further investigated with three-hour OGTT.

It appears that the majority of pregnant overt diabetic patients are in White's Class B or C.

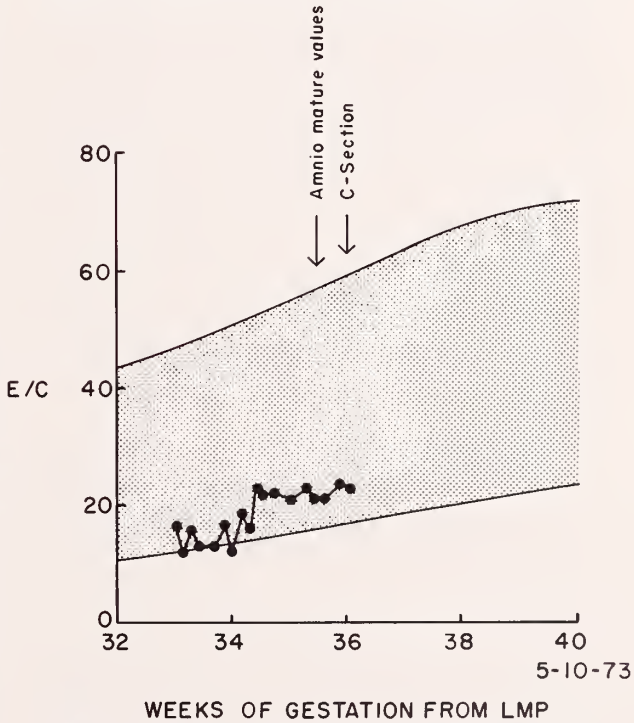


Figure 5. Case 4: Twenty-four hour urine estrogen (E/C) is low normal but shows upward trend. Several oxytocin challenge tests done were negative. Amniocentesis done on April 9 showed mature values. On April 13, an elective cesarean section was done and a live infant delivered.

They have good fetal and maternal prognosis provided they are given adequate prenatal care with good metabolic control of diabetes. Gestational diabetic patients are subject to the same type of obstetrical and fetal complications as their overt diabetic sisters, but at a much reduced incidence. O'Sullivan and co-workers[11] have shown in a prospective study that gestational diabetes patients who are under 25 years of age have normal-risk pregnancies when given adequate prenatal care. Patients 25 years or older, however, have high-risk pregnancies with significantly higher perinatal loss. Fetal and maternal complications seem to increase with the age of the mother, particularly after age 30. O'Sullivan, *et al* suggest that the same adverse effects are occurring in gestational diabetics at an earlier age.

It is of interest to note that although in the overt diabetic group, 55 per cent of newborns were preterm (less than 38 weeks gestion) by physical examination and 25 per cent weighed less than 2,500 gms., only five per cent developed respiratory distress syndrome (RDS). The incidence of RDS was 1.4 per cent in gestational diabetics. Warner and Cornblath[16] reported similar results on comparing the clinical course and laboratory findings of 31 infants of gestational diabetics and 19 infants of overt diabetic mothers.

A comparison of pregnant, overt diabetic patients managed at the Sacramento Medical Center (SMC) and the Kaiser Foundation Hospital (KFH), Sacramento, is shown in Table 3. Although about 80 per cent of the patients in both series were in Class B and C, perinatal mortality was 31.4 per cent at KFH and ten per cent at SMC. There were two perinatal deaths in the SMC series: one was anencephalic and the other a one pound, 9 ounce stillbirth in a primigravida seen for the first time in diabetic coma. The patient was unaware that she had diabetes. In the KFH series there were four neonatal deaths and three stillbirths.

All pregnant, diabetic patients at SMC were managed by a team of obstetricians and internists with special interest in diabetes. A neonatologist and anesthesiologist were frequently consulted. The newborns were cared for in the intensive care nursery by the neonatologist.

At KFH, several obstetricians, internists and pediatricians were involved in the management and care of these mothers and infants. Not infrequently, the same patient would see different obstetricians and internists during the antepartum, intrapartum and postpartum period. Delaney and Ptacek[12] and others have also pointed out that best results are obtained when pregnant diabetics are managed by the same team of physicians—obstetrician, internist, neonatologist and anesthesiologist. It must be remembered that the patient is an important member of the team. The length of prenatal care progressively increases the fetal survival rate.

TABLE 3
Pregnancy in Overt Diabetics

White's Class.	*S. M. C. Jan., '68-Feb., '73*	*K. F. H. Jan., '69-June, '74*
B	12	5
C	4	13
D	3	4
R	1	
TOTAL	20	22
Perinatal Mortality	10%	31.4%
No. Del.	4,511	12,289

Good metabolic control of diabetes should be established with the appropriate insulin dose under the supervision of an internist with special interest in pregnant diabetics. Ketoacidosis of pregnancy is treacherous, is characterized by relative hypoglycemia, and blood glucose may be less than 200 mg. per cent. Quality of diabetic control is more important than the dose of insulin required to obtain it. Good metabolic control of diabetes is the single most important factor responsible for improved perinatal mortality in these patients.

Pregnant, overt diabetic patients should be admitted to the hospital at 34 to 35 weeks of gestation. Good metabolic control of diabetes should be obtained and maintained with appropriate diet and insulin dose. Fetal well-being should be monitored continuously with appropriate biochemical and biophysical tests like daily 24-hour urine estriols, human placental lactogens, and weekly oxytocin challenge tests. Fetal maturity should be determined by objective criteria like biparietal diameter with ultrasound and amniotic fluid analysis before elective delivery of the fetus. In the absence of signs of uteroplacental insufficiency, the pregnancy is carried to as close to term as possible before delivery is elected. In the presence of signs of uteroplacental insufficiency, like falling estriols, and HPL, or positive oxytocin challenge test, the patient should be delivered soon by the most expeditious manner, usually by cesarean section.

Misenhimer and Kaltrieder,[13] in a prospective, controlled study showed that there is no evidence that preterm delivery is beneficial in reducing perinatal mortality in patients who have only an abnormal GTT. Incidence of RDS and hyperbilirubinemia was significantly higher in preterm delivered babies. Similar results were described by Stallone and Ziel,[8] Khojandi, *et al*[14] and Posner, *et al.*[15] Posner and co-workers,[15] from a prospective controlled study, concluded that the uncomplicated Class A diabetic patient does not have a significantly different perinatal mortality rate from that of the general population. While she needs special attention, she does not require early delivery. They recommend the following criteria for evaluation of a patient for early intervention or allowing her to proceed to term or even two weeks beyond:

(1) Previous unfavorable outcome
(2) Obesity
(3) Toxemia
(4) Large infant by dates
(5) Hydramnios
(6) Deterioration of carbohydrate tolerance
(7) Signs of utero placental insufficiency

In the absence of complicating factors, pregnancy is not terminated until two weeks beyond the expected date of delivery.

References

1. O'Sullivan, J. B., and Mahan, C. M.: Criteria for the Oral Glucose Tolerance Test in Pregnancy. Diabetes. 13:278-285, 1964.
2. Pedowitz, P., and Shlevin, E. L.: Perinatal Mortality in the Unsuspected Diabetic. Ob. & Gyn. 9:524-532, 1957.
3. Miller, H. C.; Hurwitz, D., and Kuder, K.: Fetal and Neonatal Mortality in Pregnancies Complicated by Diabetes Mellitus. JAMA. 124:271, 1944.
4. Drury, M. I., and Timoney, F. J.: Latent Diabetes in Pregnancy. J. Obstet. & Gynecol. Brit. Commonwealth. 77:24-28, 1970.
5. Freeman, R. K.: Obstetric Management of the Diabetic Patient. Contemporary Ob./Gyn. 1:58-60, 1973.
6. Tyson, J. E.: Obstetrical Management of the Pregnant Diabetic. Med. Clin. No. Am. 55:961-973, 1971.
7. Schwarz, R. H., and Fields, G. A.: The Management of the Pregnant Diabetic. Obstet. & Gynecol. Survey. 26:277-283, 1971.
8. Stallone, L. A., and Ziel, H. K.: Management of Gestational Diabetes. Am. J. Obstet. & Gynecol. 119:1091-1094, 1974.
9. Whitfield, C. R.; Sproule, W. B., and Brudenell, M.: The Amniotic Fluid Lecithin: Sphingomyelin Area Ratio (LSAR) in Pregnancies Complicated by Diabetes. J. Obstet. & Gynecol. Brit. Commonwealth. 80:918-922, 1973.
10. Reid, D. E.: Diabetes Mellitus in Pregnancy. Int. J. Obstet. & Gynecol. 9:1-7, 1971.
11. O'Sullivan, J. B.; Mahan, C. M.; Charles, D., and Dandrow, R. V.: Screening Criteria For High Risk Gestational Diabetic Patient. Am. J. Obstet. & Gynecol. 116:895-900, 1973.
12. Delaney, J., and Ptacek, J.: Three Decades of Experience with Diabetic Pregnancies. Am. J. Obstet. & Gynecol. 106:550, 1970.
13. Misenhimer, H. R., and Kaltrieder, F.: Preterm Delivery of Patients with Decreased Glucose Tolerance. Obstet. & Gynecol. 33:642-644, 1969.
14. Khojandi, M.; Tsai, A. Y. M., and Tyson, J. E.: Gestational Diabetes: The Dilemma of Delivery. Obstet. & Gynecol. 43:1-6, 1974.
15. Posner, N. A.; Silverstone, F. A.; Pomerance, W.; Weiss, H.; Weinstein, H., and Breuer, J.: The Outcome of Pregnancy in Class A Diabetes Mellitus. Am. J. Obstet. & Gynecol. 111:886-895, 1971.
16. Warrner, R. A., and Cornblath, M.: Infants of Gestational Diabetic Mothers. Am. J. Dis. Child. 117:678-683, 1969.

The first forty years of life give us the text; the next thirty supply the commentary.

—Arthur Schopenhauer

Disposition Of High School Athletic Injuries

K. Douglas Bowers, Jr., M. D.

THE number of high school athletic injuries referred to our office has steadily increased over the past several years. It has been my observation that a large percentage of these patients are being seen by a physician for the first time, though the injury may have occurred weeks or even months before. I have also observed that in many cases, because of the delay between time of injury and time of evaluation by a physician capable of providing definitive care, two problems arise. The first is prolongation of recovery time, or the time from moment of injury to maximum recovery. The second is the loss of the opportunity for indicated early surgical intervention, usually for torn ligaments, which then dictates a conservative regimen aimed at maximum rehabilitation after which progressive activity is allowed. If activity is well tolerated, maintenance rehabilitation is continued. If, however, after maximum rehabilitation activity must be curtailed due to residual disability, athletic competition must be discontinued or reconstructive surgery resorted to. The results of reconstructive procedures are seldom as satisfactory as that which can be anticipated when acute ligament tears are repaired early.

The purpose of this study was to determine who refers the injured athlete to a physician capable of providing definitive care, the delay between time of injury and time of evaluation, and if such delay resulted in a significant detrimental effect on recovery time or eventual outcome.

Athletic injuries are seen in our office without any potentially detrimental delay. Fresh injuries are seen as soon as possible within 24 hours of the request. Old injuries productive of residual disability are seen within a week of the request.

Method

A review of 96 high school injuries seen by the author over the past several years was made.

TABLE 1
Injuries According To Sport

	No.	*Per Cent*
Football	68	70
Basketball	19	20
Baseball	5	5.2
Track	4	4.8
Total	96	100%

The Author

- **K. Douglas Bowers, Jr., M. D., The Orthopedic Clinic, Morgantown, West Virginia; Clinical Associate Professor, Orthopedic Surgery, West Virginia University School of Medicine, Morgantown; and Physician to the Athletic Department, WVU.**

The study included: by whom the referral was made, the interval between date of injury and date of examination by the author, whether or not the delay resulted in prolongation of recovery time by at least 30 days, and whether or not the delay led to a less satisfactory result by having prevented indicated earlier treatment.

All injuries came from participation in an organized athletic program. No trauma from physical education classes, sand-lot or pick-up games was included.

Results

Table 1 shows the injuries according to the specific sport. As expected, football results in by far the most injuries, with basketball a distant second. Most of the football trauma occurred in games, rather than practice sessions.

Table 2 indicates the referral statistics. *It is very significant that only 23 per cent of the total referred were seen by a physician prior to being referred to our office.* In 34 per cent of the cases, a coach had evaluated the situation and deemed an injury severe enough to be seen by a doctor. The 32 per cent listed under "Not Referred" are for the most part seen upon direct request by a parent or the athlete himself, and have not previously been medically evaluated.

The four seen in a local emergency room were brought in soon after injury by a parent or coach. The four referred by a trainer all came from a

TABLE 2
Breakdown Of Referrals

	No.	*Per Cent*
M. D.	22	23
Coach	33	34
Not Referred	31	32
Emergency Room	4	4
Trainer	4	4
Physical Therapist	1	1.5
D. O.	1	1.5
Total	96	100%

local high school which utilizes the services of a student trainer at West Virginia University.

By carefully reviewing the records, the rapidity with which each referring agent placed the injured athlete in the hands of a physician who could provide definitive care was determined (Table 3). It is clearly seen that in the majority of cases this does not occur within the first 24 hours after injury, when evaluation is most meaningful.

The study revealed two further very important findings: (1) In 25 of the 96 cases (26 per cent), the delay in referral resulted in prolongation of recovery time by at least 30 days; and (2) In 21 of the 96 (22 per cent), the delay caused loss of the opportunity to provide proper initial care resulting in a less satisfactory eventual outcome.

Discussion

There is obviously extensive room for improvement in the primary care of athletes injured in our organized high school program. Football is the sport which should receive first consideration.

It is shocking to realize that in this study, only 23 per cent of high school injuries were seen by a physician before being referred to our office. This indicates a gross lack of adequate medical coverage for a group of young men participating in athletic events in which serious injury is common.

Equally shocking is the fact that in 34 per cent of the cases, a coach is assessing the situation, determining whether or not medical care is needed, and then making the arrangements for such care himself. No coach should accept such responsibility; certainly few are so qualified. It is also alarming to realize that in this study 32 per cent of the injured found their way to definitive care by their own efforts or by those of their parents.

The delay statistics are also quite dismal. Only 13.5 per cent of the injuries were seen within 24 hours, when clinical evaluation is most meaningful. Fewer than half (42.6 per cent) are seen within 10 days, beyond which the opportunity for primary ligament repair is lost in most instances.

Over half (57.4 per cent) were seen beyond 10 days following injury. In this group are found those in whom proper physical therapy aimed at maximum rehabilitation was delayed such that recovery time and return to competition was delayed by 30 days or more (26 per cent). Also in this group is found the 22 per cent which were denied the opportunity for the most satisfactory result because primary ligament repair was not feasible.

It must be emphasized that the sooner an athletic injury can be evaluated by someone capable of providing definitive care, be it conservative or surgical, the better. If conservatism is indicated, it should be begun immediately so that recovery time is not delayed. Loss of joint motion can be minimized, muscle atrophy prevented, and maximum stability maintained if proper early therapy is instituted. If surgical intervention is in order, the best results are obtained with early repair.

We must provide better primary medical care for the injured high school athlete. Parents, coaches, educators and physicians must be made aware of this problem. Several avenues are open which could lead to a solution and those groups must arrive at an acceptable one.

Conclusions

1. Medical coverage of organized high school athletic programs is inadequate.
2. Recovery time following many high school athletic injuries is unnecessarily prolonged.
3. Many high school athletic injuries are not evaluated early enough to receive the treatment which affords the best result.
4. Injured athletes deserve immediate medical evaluation with the opportunity of being provided proper early care, be it conservative or surgical.
5. Educators, administrators, parents, coaches and physicians must be made aware of this problem and institute corrective measures.

TABLE 3
Delay Data

Referred by	*M.D.*	*Coach*	*N.R.*	*E.R.*	*Trainer*	*P.T.*	*D.O.*	*Total*	*Per Cent*	
DELAY										
Within 24 hrs.		5	3	4	1			13	13.5%	42.6%
24 hrs. to 10 days	3	11	12		2			28	29.1%	
10 days to 6 wks.	5	12	8		1			26	27.3%	57.4%
6 wks. to 6 mos.	6	4	4					14	14.5%	
Over 6 mos.	8	1	4			1	1	15	15.6%	
								96	100%	

A message from . . .

The President

COMMUNICATE TO LEGISLATE

ELSEWHERE in this issue is an editorial submitted by our learned and gutsy Executive Secretary. Having reviewed his comments, I can attest to his accuracy and do concur with his assay of our political posture.

Allow me to reflect briefly on our legislative experience, having attended multiple hearings and interim committee sessions on medically related subjects.

I was left with the distinct impression that generally, but with a few exceptions, legislators are turned off by the medical profession. This must be reckoned with and a better understanding must be had if we are to advance legislation in our behalf.

Somehow, we have failed to communicate within our own association and have failed to communicate with our local legislators. This became grossly apparent with the passage of the Optometry Bill, which was vetoed by our Governor but over-ridden by the Legislature. This particular bill represents the most irresponsible piece of legislation I have seen in a lifetime.

The flippant attitude of some legislators toward the medical needs of our state is indeed frightening. To cope with the increasingly dangerous dilution of the professional activity of licensed M.D.'s by unresponsive and irresponsible legislators, it becomes increasingly important that we maintain not only the strength of unity, but the strength of solidarity. Our only hope lies in the concerted effort and strong voice of our federation if we are to maintain the high standards we have set for ourselves and this country in the care of the sick.

The Ad Hoc Committee on Professional Liability and your Insurance Committee have worked diligently with a legislative committee and others for seven months to develop a reasonable answer to the liability problem. At this writing, two bills are being considered by the Legislature. Neither bill remotely resembles that your committees helped develop, and neither bill inclues one iota of tort reform.

These proposed bills guarantee a source of payment for awards, but do little to correct the abuses of the system. Each bill is a poor excuse for a corrective measure, and each is evolved to legalize and perpetuate the present system with as little modification as possible. The only beneficiaries are *not* the *citizens* of our state, but members of the State Bar.

I have taken this space for this brief review believing that we do not have time to "wait and see" what happens – but instead must continue our diligent pursuit of corrective legislation in finite detail. I do so in the belief that members of our Association are not of a mind to take what they have been given, nor to pack their little black bag, nor to tuck their tails between their legs, nor to go out the door and await the next assault on their efforts to care for the sick.

That is where we are. When we started, we expected to be frustrated, thwarted, circumvented and balked – and that we would have to go back again and again over the years to obtain meaningful reform of present liability legislation.

The lawyers have us outnumbered, but on the average they are no match for us in intelligence, industry or dedication. Just don't let them ambush us while we are absorbed in caring for our patients.

Jack Leckie

JACK LECKIE, M. D., *President*

THE WEST VIRGINIA MEDICAL JOURNAL

Official Organ of the West Virginia State Medical Association

The Publication Committee is not responsible for the authenticity of opinion or statements made by authors or in communications submitted to this Journal for publication. The author or communicant shall be held entirely responsible

Editor
GEORGE F. EVANS, M. D.
122 South Sixth St.
Clarksburg, W. Va.

Managing Editor and
Business Manager
MR. CHARLES R. LEWIS
Box 1031
Charleston, W. Va. 25324

Associate Editors:
VERNON E. DUCKWALL, M. D.
Elkins
JOHN M. HARTMAN, M. D.
Charleston
THOMAS J. HOLBROOK, M. D.
Huntington
JOE N. JARRETT, M. D.
Oak Hill
EDWARD J. VAN LIERE, M. D.
Morgantown
STEPHEN D. WARD, M. D.
Wheeling

Published monthly on the first day of the month, at Charleston by the West Virginia State Medical Association. Original articles are accepted on condition that they are contributed exclusive to the Journal. Advertising rates furnished on request.

Address all communications to Business Manager, West Virginia Medical Journal, Box 1031, Charleston, West Virginia 25324. Phone 346-0551.

EDITORIALS

For one (the writer) who has been close to the West Virginia legislative process in a number of roles for 30 years, the 1976 session has set new records for frustration and concern.

SOME SOBER REFLECTIONS

For medicine, under current fire on about every possible front everywhere, this year's experience has been in considerable measure discouraging and even frightening. But at the same time, it has pointed up some of medicine's own shortcomings, at least in the area of communications.

Except for a handful of the Legislature's more experienced and knowledgeable members, one finds far too little understanding of the true status of medical care in the State, or of many of the problems as they actually exist.

It's true some physicians felt, in first-hand contacts with legislators, that those particular individuals lacked any real desire to be informed. Certainly, however, others in House and Senate stand ready to learn—and new efforts must be made to reach them, by Medical Association staff, doctors or whatever other means are available.

In two unfortunate instances, physicians reported to the State Medical Association's headquarters office that they considered themselves rudely treated by legislators they called to discuss pending bills.

It was the exception, certainly, but physicians encountered attitudes they felt at least bordered on hostility in legislative committee appearances. One legislator in the knowledgeable category expressed personal concern about this after one such hearing.

Those close to the situation had no doubts that the optometry legislation, in particular, was passed as a result of raw, well-funded political power, which largely negated proper consideration of the extremely important issues of medical care involved. Physicians are making it clear they feel that this legislation represented irresponsible action by House and Senate.

Physicians, like others, have means of attacking their problems. One remedy starts at the ballot box, and continues with on-going contacts, on a consistent basis, with their legislators in their home counties. As one senator put it several times, "the doctors just have to get involved back home."

Admittedly, this presents a serious challenge. Physicians are, by training and professional activity, concerned with *people*, and in most instances are swamped with *patient* care demands. But—physicians must, more than at any other time, find what hours are necessary to add another "p" in the form of *politics* to their schedules.

It was heartening to work this year with more physicians than perhaps at any time in at least recent sessions in developing positions on legislation. Many of these efforts were productive. But much, much more needs to be done.

In a few words: physicians must know who is running for office, particularly for the Legislature, and for what they stand. They must participate in appropriate fashion in political campaigns. And they must make every effort to develop the kinds of contacts with those elected that will assure easy, effective and continuous means of communication.

Medicine has its difficulties, as do other elements of society. Efforts toward solutions, particularly through legislation, have to begin "back home." (CRL)

AMNIOCENTESIS APPEARS SAFE AND ACCURATE

This conclusion summarizes the findings regarding midtrimester diagnostic amniocentesis reported from a major prospective study involving nine medical centers sponsored by the National Institutes of Child Health and Human Development. The study results were reported in the Medical News section of the December 22, 1975, *Journal of the American Medical Association.* A comparison of 1,040 women undergoing amniocentesis and 992 matched controls showed no significant adverse effects on the outcome of pregnancy.

Midtrimester amniocentesis was first used in 1968 to diagnose Down's syndrome. The cellular examination of amniotic fluid can also reveal many inborn genetic defects, with an overall accuracy as high as 99 per cent. Theodore Cooper, M. D., Assistant Secretary for Health of the U. S. Department of Health, Education and Welfare, stated that amniocentesis has moved from the realm of a research procedure to a part of clinical practice. He urged the Public Health Service to foster use of amniocentesis for those women for whom it is indicated, through education of physicians and the public on the availability, applicability and safety of the procedure.

Amniocentesis at approximately 14 to 16 weeks' gestation is indicated for those women who have already had a child with a chromosomal anomaly, those with a family history of such anomalies, or of metabolic disorders (now numbering more than 60), and in women known to be carriers of serious X-linked diseases.

The Department of Obstetrics and Gynecology of the West Virginia University School of Medicine encourages this procedure for the following patients:

(a) A previous child with a neural tube defect such as anencephaly or meningomyelocele, for determination of alpha feto-protein content of the amniotic fluid.

(b) Families at risk for autosomal recessive disorders known to be detectable in utero, such as Tay-Sachs disease, Lesch-Nyhan syndrone and glycogen storage disease.

(c) Families at risk for X-linked recessive disorders such as hemophilia, muscular dystrophy.

(d) A previous child with trisomic Down's syndrome.

(e) A parent known to carry a chromosomal translocation.

(f) Maternal age over 35 years.

The WVU Medical Center's cytogenetics laboratory of the Pediatrics Department offers superb facilities for culture of cells from the amniotic fluid for chromosomal analysis including fetal sex and possible abnormalities.—*Guest Editorial by Charles A. White, M. D., Professor and Chairman, Department of Obstetrics and Gynecology, West Virginia University School of Medicine.*

GREAT EXPECTATIONS FOR FAMILY PRACTICE PROGRAM

The number of young doctors in the West Virginia family practice residency program will reach an all-time high July 1, Dr. John W. Traubert, President of the West Virginia Academy of Family Physicians, has reported.

Doctor Traubert said the program, now entering its third year, will have 37 physicians, including 11 new first-year residents. The newcomers to the medical specialty program will be guests of doctors at their annual scientific assembly here April 9-11.

In addition to the training centers now established at Clarksburg, Charleston, Morgantown and Wheeling, Doctor Traubert said new programs will be started at Huntington and Parkersburg before the end of this year.

"Another four years should see a reversal to the present doctor shortage in this state," the Academy President declared. "Ours is the fastest growing medical specialty in the profession."

In addition to developing family practice specialists, the residency program presently is providing more than 4,000 families with supervised care at a reasonable cost.

Doctor Traubert predicts that when the program is at an operating peak, between 30 and 40 new physicians will enter medical practice each

year. Most of the residents are expected to open offices in this State.

The 35,000-member American Academy of Family Physicians, through its active chapters in each state, has sparked the new specialty recognized only recently by the American Medical Association. Dr. Carl B. Hall of Charleston, this year's national President, is the first West Virginian to hold that office.

Doctor Traubert said seven of the 11 first-year residents were Mountain State natives and graduates of the WVU Medical School. The new participants and their assignments include:

Patricia Harrison and John Moran, both WVU, Wheeling; Curtis Rogan, California, Clarksburg; James Arbogast, Paul Livengood, Fred Conley, all WVU, and William Stapleton, Illinois, Morgantown; John N. Casto, Jerry W. Edens and Harry D. Fortner, all WVU, and W. Bruce Obenshain, Maryland, South Charleston.

Our Readers Speak

DOCTOR SAMMONS REPLIES

We would appreciate the opportunity to reply, via the pages of your Journal, to the President's Message in February, 1976 entitled, "How About This, AMA?"

Whether NHI is inevitable or not, the AMA has long supported the concept that Americans should voluntarily protect themselves against the cost of medical care through the purchase of health insurance. The AMA's bill (H.R. 6222, the Comprehensive Health Insurance Act of 1975) carries out this historic AMA policy. It does not force anyone to buy health insurance, but does require employers to make it available to their employees, as most employers do through the private sector.

The AMA agrees with you that Senator Kennedy's claim that there is a "crisis" in health care is absurd. Contrary to the message in your Journal, the AMA never accepted this premise. In fact we have protested that there is no crisis, but that does not mean we have buried our heads in the sand and pretend that there are no problems. AMA has recognized that there are problems and has addressed itself to those problems. For instance, the AMA has sponsored or supported legislation and adequate appropriations for the Indian Health Service, for experiments and demonstration projects in rural health, for maternal and child health programs, for demonstration projects and initial support for emergency health services, to name a few. But, for the great majority of Americans, the AMA believes that their health insurance and medical care should be provided by a physician of their choice—through the private sector.

Your President's letter quotes a Member of Congress as follows: "This is not [the] time even to think of passing spendthrift legislation like NHI." To that the AMA says Amen. We so testified before the House Ways and Means Committee, November 11, 1975.

James H. Sammons, M. D.
Executive Vice President, AMA
535 North Dearborn Street
Chicago, Illinois 60610

WHEN IS DEATH 'IRREVERSIBLE'?

Your editorial in the current [January] edition of the West Virginia Medical Journal did not comment on the use of the word *irreversible* in the new definition of death adopted by your legislature almost a year ago. It seems to me inherently absurd, and impossible, for any physician to say "this patient has stopped breathing and he is not going to start again." Or, "this patient's heart has stopped beating and it is not going to start again." Or, "this patient's brain functions have ceased, and they are not going to resume."

Of course, as we all know, if a patient is neither breathing nor experiencing any spontaneous heartbeat, the likelihood that it *will* start again is very remote unless something is done to assist it. But for a physician to proclaim that the cessation is "irreversible" at any given time seems to me impossible and to obviate any possible usefulness of the law.

Harry L. Arnold, Jr., M. D.
Straub Clinic & Hospital
888 South King Street
Honolulu, Hawaii 96813

The above letter was referred to Doctor Holbrook, who offers the following reply:

To Doctor Arnold: I have been supplied with a copy of your letter to Dr. George Evans, Editor of The West Virginia Medical Journal, in relation to my editorial, "Death Defined in West Virginia," in the January, 1976, issue of The Journal.

I wish to thank you for your observations. You have come to the core of the matter in commenting upon the word "irreversible." The editorial does comment upon the problem of making the determination of "irreversible cessation of brain functions." Every physician who signs a death certificate has had to reach the decision that the life processes of an individual have ceased "irreversibly;" but could he fix the exact instant of death? You and I could doubtless agree when it is daylight and when it is dark, but might well be unable to fix to our mutual satisfaction the instant dawn has become daylight or twilight has faded into night.

Sometimes we are forced by events to accept the practical. The editorial points to the fact that the criteria for the establishing of death to everyone's satisfaction may be virtually unattainable.

I cannot agree with you that our law is useless even if it does not define (if it can be defined) "irreversible" in the sense used in assessing death in which you are concerned. We as physicians must make the determination of death upon our best scientific judgement and we may have to leave the philosophers to debate the moment of our passing.

Thomas J. Holbrook, M. D.
1214 W. Va. Building
Huntington, W. Va. 25701

GENERAL NEWS

Two Additional Speakers Selected For 109th Annual Meeting

Dr. Robert D. Hess of Bridgeport, Chairman of the Program Committee, has announced that Dr. Richard W. Moriarty of Pittsburgh and Dr. Thomas L. Stern of Kansas City, Missouri, have accepted

Richard W. Moriarty, M. D.

Thomas L. Stern, M. D.

invitations to present papers during the 109th Annual Meeting of the West Virginia State Medical Association. The convention will be held at The Greenbrier in White Sulphur Springs, August 18-21.

Doctors Moriarty and Stern will speak at the third general session on Saturday morning, August 21.

Dr. Richard E. Flood of Weirton will moderate the Saturday morning session, and also will coordinate a practical discussion of "Joint Practice of Nurses and Physicians As an Approach to Meeting Growing Primary Care Demands" during that session.

Richard W. Moriarty, M. D.

A native of Pittsburgh, Doctor Moriarty is Assistant Professor of Pediatrics at the University of Pittsburgh School of Medicine, and Director of the National Poison Center Network at the Children's Hospital of Pittsburgh.

He also is Assistant Director of the Ambulatory Care Center and Chairman of the Pharmacy Committee at the Children's Hospital; and is a consultant for the Western Pennsylvania School for Blind Children in Pittsburgh.

In the Pittsburgh area, Doctor Moriarty is Co-Chairman of the Committee on Hazardous Materials of the Allegheny County Health Department, physician for the St. Mary's football team (nine to 14-year-old boys), advisor to the Scope and Scalpel Society of the University of Pittsburgh School of Medicine senior students, and the founder and 1974 President of the Variety Club of Children's Hospital of Pittsburgh. In 1974, he was selected by the Pennsylvania Jaycees as one of the Ten Outstanding Young Men of Pennsylvania.

Doctor Moriarty is a Candidate Fellow of the American Academy of Pediatrics and Chairman of the Poison and Accident Prevention Committee of the Pennsylvania Chapter of the Academy. He also is a member of the American Association of Poison Control Centers, the American Academy of Clinical Toxicology, and the Ambulatory Pediatric Association.

Doctor Moriarty was graduated from the University of Pittsburgh and received his M. D. degree in 1966 from that institution's School of Medicine. He served his internship and residency at Children's Hospital of Pittsburgh. He is the author of scientific articles which have appeared in *Psychosomatic Medicine, Pediatrics for the Clinician,* and *Clinical Toxicology.*

Thomas L. Stern, M. D.

Doctor Stern is Director of the Division of Education of the American Academy of Family Physicians in Kansas City. A native of San Francisco, Doctor Stern was in a general practice partnership in Sherwood, Oregon, from 1952 to 1960; and in solo general practice in Manhattan Beach, California, 1960-74. He was Director of the Family Practice Residency Training Program at the Santa Monica (Calif.) Hospital Medical Center, 1970-74; and lecturer in the Department of Preventive and Social Medicine, UCLA School of Medicine, 1970-74.

A Past President of the California Academy of Family Physicians, he has held a number of appointments with the AAFP, including those as member, National Commission on Membership and Credentials, 1967-73; and Consultant in Family Practice—AAFP Commission on Education, 1972-73. He is Technical Advisor for the "Marcus Welby, M. D." television series, Medical Advisor for the Medical Program, Blue Shield; and was Chairman of the Grant Review Committee, Regional Medical Program, Area IV, 1971-73.

Doctor Stern was graduated from Willamette University at Salem, Oregon, and received his M. D. degree in 1950 from the University of Oregon Medical School. He served his internship and residency at St. Vincents Hospital in Portland.

He has presented a number of papers concerning family practice at AAFP and other meetings; and currently is preparing a major scientific paper on an "Overview of Family Practice—1969-1975."

Three General Scientific Sessions

Doctor Hess said there will be three scientific sessions on Thursday, Friday and Saturday mornings. It was announced previously that Drs. Richard B. Hornick of Baltimore and Paul M. Stevens of Houston will speak at the first general scientific session on Thursday morning, August 19, which will be devoted to a "Symposium on Pulmonary Diseases." Names of other guest speakers, and program details, will be provided in future issues of *The Journal.*

Business Meetings

The Pre-Convention Meeting of the Council will be held on Wednesday morning, August 18, and the first session of the House of Delegates has been scheduled that afternoon. It also was announced previously that Dr. Richard E. Palmer of Alexandria, Virginia had accepted an invitation to speak at the first session of the House of Delegates. Doctor Palmer will be installed as President of the American Medical Association during the annual meeting at Dallas in June.

Dr. Jack Leckie of Huntington, the President, will deliver his Presidential Address at the final session of the House of Delegates on Saturday afternoon, August 21.

Nationwide Details Activity As Medicare Carrier

Nationwide Insurance, the Medicare Part B (physicians' services) carrier for Ohio and West Virginia, has reported that it achieved the No. 1 rating in productivity among 47 Medicare carriers in the country in the fiscal year ended last June 30.

Productivity is based on the number of claims processed per full-time employee in a 12-month period, the company said. It added that its productivity for fiscal 1975 showed 9,191 claims processed per employee, compared to a national average of 5,139.

In fiscal year 1972, Nationwide had a staff of 640 to process 2,336,300 claims. In fiscal year 1975, 355 employees processed 3,262,779 claims.

Also during fiscal 1975, Nationwide said, its administrative cost per claim processed was $2.60, compared to the national average of $3.21. Viewed from another perspective, Nationwide's administrative cost was 6.7 per cent of the amount of benefits paid compared to the national average of 8.4 per cent.

Nationwide added that its administrative cost per claim was the lowest of all carriers in its peer group (those carriers processing a comparable volume of claims), and fifth best among all carriers. Only four carriers with small claim volume and service areas had a better cost record.

During fiscal 1975, Nationwide received 3,293,897 claims, an increase of 22.6 per cent over the prior fiscal year, and processed 3,262,779 claims. It said timeliness of claim processing was among the best in the country. More than 73 per cent of all claims received were processed within 15 days after they were received at Nationwide's Medicare processing center in Columbus, Ohio.

All Medicare carriers are required to meet quality standards built into the program, and Nationwide said it utilizes processing quality control programs, including sophisticated electronic data edit checks, to maintain quality processing standards. This, together with field evaluation of provider/beneficiary satisfaction with claim processing timeliness and effectiveness, is designed to assure continued high-quality performance.

Benefit cost containment is an area where it is anticipated that carrier performance will be measured and compared in the future, Nationwide noted. This measurement will relate to a carrier's ability to control program abuse including over-utilization and potential fraud. Much of the Federal government's concern in this area has been generated by an increasing cost of health care, and by media releases of alleged program abuse and fraud published during the past year.

Nationwide said it expects to meet this challenge "in a responsible manner." Existing utilization and integrity control programs will be modified as necessary, and carried out in a manner that will assure equity and due process with a recognition of accepted medical practice and the essential components of quality health care, the company promised.

The Hancock Medical Society recently donated $300, in honor of Dr. Richard E. Flood of Weirton, to the Weirton campus of West Virginia Northern Community College (WVNCC). The funds, to be matched on a 9 to 1 basis by Federal dollars, are earmarked for the Nursing and Allied Sciences Scholarship and Loan Fund, the choice of Doctor Flood. Participants in the presentation were, from left, Doctor Flood; Dr. George S. Kosar, President of the Hancock Medical Society; Terry Thistlethwaite, Director of the WVNCC Weirton campus, and Dr. Carlos L. Vasquez, Secretary-Treasurer of the Hancock Medical Society. Doctor Flood, a Past President of the Society and the State Medical Association, is Chairman of the Association's Nurses Liaison Committee.

Continuing Education Activities

Here are the continuing medical education activities listed primarily by the West Virginia University School of Medicine for part of 1976, as compiled by Dr. N. LeRoy Lapp, Assistant Dean for Continuing Education. The schedule is presented as a convenience for physicians in planning their continuing education program. (Other national, state and district medical meetings are listed in the *Medical Meetings* Department of *The Journal.*)

The program is tentative and subject to change. It also should be noted that weekly conferences are held on both the Morgantown and Charleston campuses. Further information about these may be obtained from: Division of Continuing Education, WVU Medical Center, P. O. Box 2867, Charleston 25330; or, Office of Continuing Medical Education, WVU Medical Center, Morgantown 26506.

(1976)

Apr. 1, 2, 3	Cancer Teaching Day	Morgantown
Apr. 23, 24	Lipids Related to Atherosclerosis—Department of Pathology	Morgantown
Apr. 26	Ob.-Gyn. Symposium	Morgantown
Apr. 28, 29, 30-May 1	Department of Surgery and West Virginia Chapter of American College of Surgeons	White Sulphur Springs
Apr. 30-May 1	Seminar on Blood Banking	Morgantown
June 4	Second Annual ENT Teaching Day	Morgantown
June 7	Controversies in Surgery	Charleston
June 26	Anesthesia Update 1976	Morgantown
June 13-18	School of Alcohol and Drug Abuse Studies	Morgantown
Summer of 1976	Extension Programs in Psychiatry	

Change of Address

Members of the West Virginia State Medical Association are requested to notify the headquarters offices promptly concerning any change in address. Notices should be mailed to Box 1031, Charleston, West Virginia 25324.

Pulmonary Medicine Seminar Scheduled In Huntington

A Physician's Seminar on "1976 Topics in Pulmonary Medicine" will be held on May 8 at the Downtown Holiday Inn in Huntington. The conference is being sponsored by the West Virginia Thoracic Society and the West Virginia Lung Association, in cooperation with St. Mary's Hospital in Huntington, and Cabell-Huntington Hospital.

The one-day program will begin with registration at 8:15 A. M., followed by the first scientific presentation at 9 A. M.

A spokesman for the conference said that the program is geared for primary physicians as well as for pulmonary specialists.

The speakers and their topics will be:

"Fiberoptic Bronchoscopy—1976 Update"—Ronald B. George, M. D., Professor of Medicine and Chief, Pulmonary Disease Section, Louisiana State University of Medicine, Shreveport; "Office Pulmonary Function Evaluations: Why Do It? What Equipment Should You Use?"—N. LeRoy Lapp, M. D., Associate Professor, Pulmonary Division, Department of Medicine, West Virginia University School of Medicine;

"Treatment of Tuberculosis—1976"—Whitney W. Addington, M. D., Chairman, Division of Pulmonary Medicine, Cook County Hospital, Chicago; "Carcinoma of the Lung: Diagnosis and Therapy—1976"—George J. Hill II, M. D., Associate Dean for Clinical Affairs; and Chairman and Professor, Department of Surgery, Marshall University Medical School;

"Allergic and Industrial Bronchitis and Pneumonia"—Morton B. Ziskind, M. D., Professor of Medicine and Chief, Pulmonary Service, Tulane University School of Medicine, New Orleans; and "Current Status of Respiratory Therapy—Pro and Con"—Doctor George.

Following questions and discussion, the seminar will adjourn at 4:45 P. M.

The seminar has been approved for six credit hours in Category 1 of the American Medical Association Physician's Recognition Award—and credit from the American Academy of Family Physicians has been requested.

The registration fee, including cost of the luncheon, is $40 for physicians and $30 for allied health personnel until April 23. After that date, the fee will be $50 for physicians and $40 for allied health personnel. The fee for physicians in training is $10.

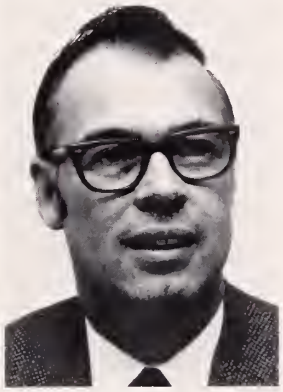
For further information and registration, contact Harry K. Tweel, M.D., Chairman, Seminar Planning Committee, P. O. Box 4228, Charleston 25304 (telephone (304) 925-6664). Checks may be made payable to "WVLA."

State AAFP Chapter Scientific Assembly In Charleston

The 24th annual Scientific Assembly of the West Virginia Chapter, American Academy of Family Physicians, will be held in Charleston, April 9-11, at the Daniel Boone Hotel.

Registration will begin at 8 A. M. on Friday, April 9, followed by the opening of the assembly

Carl B. Hall, M. D.



John W. Traubert, M. D.

at 8:30 by John W. Traubert, M. D., Chairman of the Department of Family Practice at the West Virginia University School of Medicine; and President of the West Virginia Chapter.

Welcoming remarks will be made by Dr. Jack Leckie of Huntington, President of the State Medical Association; and Dr. Joheph T. Skaggs of Charleston, President of the Kanawha Medical Society.

Friday Morning Session

Dr. Jean P. Cavender of Charleston will be moderator for the Friday morning session. The speakers and their topics will be:

"Management of Acute Kidney Disease"—Neil Kurtzman, M. D., Professor of Medicine, University of Illinois, Chicago; "Pneumoconiosis and the Family Physician"—Rowland H. Burns, M. D., Huntington Internal Medicine Group; and "Examination and Early Detection of Breast Cancer"—Frank Folk, M. D., Professor of Surgery, Loyola University, Stritch School of Medicine, Maywood, Illinois.

Friday Afternoon Session

Dr. Donald E. Cunningham of St. Albans will moderate the Friday afternoon session. The speakers and their topics will be:

"Critical Care Medicine and the Family Physician"—James W. Kessel, M. D., Assistant Professor of Anesthesiology, WVU; "Responsibilities of Being a Team Physician"—K. Douglas Bowers, Jr., M. D., Morgantown, Physician to the Athletic Department, WVU; "The Recognition and Treatment of Pneumonias"—Steven Mostow, M. D., Director of Infectious Diseases, Department of Medicine, Case Western Reserve University, Cleveland; and "Current Education of the Family Practitioner—Both Undergraduate and Graduate"—Robert C. Parlett, M. D., former Dean, Marshall University Medical School.

Saturday Morning Session

Moderating the Saturday morning session will be Dr. William S. Sadler of Barboursville. The speakers and their topics will be:

"Anaerobic Infections"—Doctor Mostow; "Practical Office Gynecology"—John G. Boutselis, M. D., Professor of Obstetrics and Gynecology, Ohio State University, Columbus; "Update on Monitoring the Patient in Labor"—Charles A. White, M. D., Professor and Chairman, Obstetrics and Gynecology, WVU; and "Pediatric Heart Murmurs—When to Refer?"—William A. Neal, M. D., Assistant Professor, Pediatric Cardiology, WVU.

Saturday Afternoon Session

Harry D. Fortner of Stollings, WVU medical student, will moderate the Saturday afternoon session. The speakers and their topics will be:

"Drugs in the Emotionally Upset Patient"—Donald C. Carter, M. D., Professor of Behavioral Medicine and Psychiatry; and Director, Psychiatric Consultation Service, WVU; "Modern Concepts in Evaluating Neuromusclar Disorders"—Lee H. Pratt, M. D., Charleston; and "Clinical Investigations by the Family Physician"—Robert Rakel, M. D., Chairman, Family Practice Department, University of Iowa, Iowa City.

Sunday Morning Session

On Sunday morning, Dr. Thomas P. Long of Man will be the moderator. The speakers and their topics will be:

"The Problem Oriented Medical Records for the Family Physician"—Doctor Rakel; "New Drug Treatments of Rheumatoid Arthritis"—Thomas R. Hobbs, M. D., Ph.D., Clinical Researcher, Internal Medicine and Rheumatology, Camp Hill, Pennsylvania; and "How to Keep from Being Sued for Malpractice"—Stanley E. Preiser, LLB, LLM, Attorney at Law, Charleston.

Business, Other Meetings

Board of Directors meetings will be held on Thursday at 7 P. M. and Sunday at 1 P. M. in the

Charles A. White, M. D.

Stanley E. Preiser, LLB, LLM

Chapter hospitality suite. A House of Delegates Meeting will be held on Friday from noon to 1:30 P. M. in the hospitality suite.

The annual banquet will be held on Saturday at 6:30 P. M., with Dr. Carl B. Hall of Charleston, President of the American Academy of Family Physicians, serving as master of ceremonies.

Registration, Other Information

There will be a registration fee of $45 and a cocktails and banquet charge of $12.50. Except for the latter charge, there will be no fee for nurses, residents, interns and students.

The program has been approved for 17 hours of Prescribed Credit by the AAFP.

Maryland Medical And Chirurgical Faculty Meeting April 28-30

The 178th Annual Meeting of the Medical and Chirurgical Facility of Maryland will be held April 28-30 at the Hunt Valley (Md.) Inn.

The scientific program will consist of concurrent sessions co-sponsored by the faculty and various specialty societies; and there will be the annual "Lunch and Learn Session."

Social functions will include the Presidential Banquet, Thursday evening Cabaret and Hospitality Night.

Also scheduled are educational, scientific and technical exhibits; and Health Evaluation Tests for Physicians.

There is no registration fee. The program has been approved for credit by the American Academy of Family Physicians—and for credit for the Physician's Recognition Award of the American Medical Association.

For a detailed program and reservation forms, contact: Medical and Chirurgical Faculty of the State of Maryland, 1211 Cathedral Street, Baltimore 21201 (telephone (301) 539-0872).

Be On Guard Against Insurance Schemes

The West Virginia Insurance Commission has noted that, because of current problems in the availability and cost of professional liability insurance, numerous schemes and solutions are being promoted by illegal and/or unethical sources.

The Commission has cautioned all physicians to avoid acceptance of unsound solutions to these insurance problems, and has invited physicians to utilize the assistance of that agency whenever possible to determine certification of the various proposals.

Seven Physicians Named To Staff Of Marshall Medical School

Seven physicians have been named to fill staff positions with the Marshall University Medical School, it was announced recently by Dr. Robert W. Coon, Acting Dean.

Five of eight departmental chairmanships and two of six projected basic science departmental chairmanships have been filled.

The seven physicians and their appointments are:

Dr. George J. Hill II, Chairman of Surgery and Associate Dean for Clinical Affairs, formerly Professor of Surgery at Washington University School of Medicine, St. Louis, Missouri;

Dr. Ray M. Kessel, Chairman of Family Practice, a Charleston native, formerly affiliated with the Logan General Hospital;

Dr. Ruth Harris, Chairman of Pediatrics, formerly Associate Attending Pediatrician at Babies Hospital and Vanderbilt Clinic (since 1950);

Dr. James E. Moreland, Chairman of Anatomy, formerly Professor of Anatomy at the Southern Illinois University School of Medicine;

Dr. Dennis K. Mann, Chairman of Microbiology, formerly an associate professor at Southern Illinois University;

Dr. Siegfried Werthammer, Chairman of Pathology, formerly Chief Pathologist and Director of Laboratories at Cabell-Huntington Hospital;

Dr. Charles H. McKown, Jr., Chairman of Radiology, formerly associated with Radiology, Inc. in Huntington.

Aetna Suggests How Doctors May Safeguard Interests

(*Editor's Note*: The following is additional material provided by Aetna Life and Casualty as a part of its education and communication efforts as they relate to malpractice insurance coverage the company currently provides West Virginia physicians.)

What should a physician do to protect his own interests, legally, when he is suspicious of medical malpractice by another physician; or in a situation where he is alerted by an attorney that he may be the subject of a law suit?

Aetna Life and Casualty Company, which operates with the West Virginia State Medical Association a group professional liability insurance program for Association members, has some observations relative to the question.

When examining a patient, if a condition suggesting malpractice by another physician is found, Aetna's experience suggests the physician give attention to the following:

—1. Take steps to establish you are really dealing with a mistake, and not just a poor result or a legitimate difference of opinion.

—2. Do not conceal any medical facts.

—3. Leave legal opinions to the attorney.

—4. Notify the other physician when you discover his mistake.

—5. Record all relevant details of the case.

—6. Notify your insurance carrier or attorney.

—7. Maintain rapport with the patient.

It is difficult, Aetna emphasizes, to determine how many non-meritorious malpractice claims are generated by one physician criticizing the treatment of another, but it is not an uncommon phenomenon in the handling of such claims. "No injury which has truly occurred because of a physician's careless act should be concealed," Aetna explains. "By following the above guide, the interest of all concerned can be best protected," the company suggests. The Aetna recommendation continues:

"When you suspect that a malpractice suit may be filed against you, notify your carrier or lawyer immediately.

"When a lawyer contacts you and says, 'My client is considering suit, but as one professional to another, I don't like the idea. Let's get together and talk it over.'—*DON'T!* Contact your carrier or lawyer at once.

"While a patient or his legal representative is entitled to your medical records, you are under no obligation to discuss the management of the case with the attorney. You will avoid the possibility of jeopardizing the defense of your case by having the insurance company or your lawyer deal with the matter."

State Affiliate, Diabetes Assn. Elects New Officers

New officers of the American Diabetes Association, West Virginia Affiliate, Inc., were elected at a recent membership meeting in Charleston.

Mr. John Panza of Fairmont assumed the office of President of the West Virginia Affiliate for a two-year term, 1976-77.

Mr. Samuel P. Cerra of Wheeling was elected President-Elect, and Dr. Paul C. Davidson of Morgantown was elected Vice President and Chairman of the Professional Section of the Affiliate.

Elected to a three-year term on the Board of Directors were Dr. Samuel Biern of Huntington, Mrs. Mary Kinney of Wheeling; and Dr. Steven A. Artz, Mrs. Mary Connolly and Dr. Herbert H. Pomerance, all of Charleston.

They will join present board members: Julia Daniel, R.N., of Beckley; Dr. William C. Crittenden of Fairmont, Drs. Margaret J. Albrink, William G. Klingberg and Isaiah A. Wiles, all of Morgantown; and Ms. Helen Lodge, R.D.; Dr. German Lizarralde, Mrs. Dorothy Arthur (Secretary), and Mr. William Sloman (Treasurer), all of Charleston.

Doctor Esposito Receives Award From Honor Society Chapter

Dr. Albert C. Esposito, Huntington ophthalmologist, has been named the recipient of an honor award for this year from the Epsilon Chapter of Alpha Omega Alpha Honor Society at Loyola University Medical Center in Chicago.

The award was announced by Herbert M. Rubinstein, M. D., Counselor for the Epsilon Chapter, and Rola P. Baker, President. Alpha Omega Alpha is an honorary medical society with chapters in every medical school in the United States.

The notation stated that Doctor Esposito was selected for the award based on his position in and contributions to ophthalmology. A Past President of the State Medical Association, Doctor Esposito was graduated from Loyola. At the present time, he is President of the American Association of Ophthalmology; and is a member of the West Virginia House of Delegates from Cabell County.

Pathologists Plan Two Programs At WVU, April 30-May 2

A seminar on "Blood Bank and Blood Products" will be held at the West Virginia University Medical Center on April 30 and until noon on May 1. The program will constitute the Spring Seminar of the Continuing Education Program on Laboratory Medicine, sponsored by the WVU Medical Center and co-sponsored by the American Society of Clinical Pathologists.

On May 1, beginning at 1 P. M., and on May 2, until noon, the Annual Meeting of the West Virginia Association of Pathologists will be held at the WVU Medical Center.

Scientific papers on "Recent Advances in Anatomical and Clinical Pathology" will be held during the Saturday, May 1, program. There also will be a business meeting to elect new officers.

During the Sunday morning program, there will be discussion of slides sent to participants in advance.

For further information, contact Dr. Vicente Anido, Professor and Chairman of Clinical Pathology at WVU; and President of the West Virginia Association of Pathologists.

Dr. Abnash C. Jain Named Cardiology Governor

Dr. Abnash C. Jain of Morgantown has been named Governor for West Virginia by the American College of Cardiology (ACC). Doctor Abnash was one of 23 of the ACC's Fellows to be named to its Board of Governors. The new governors will be responsible for the activities of the College within their regions. Doctor Jain is Associate Professor of Medicine at the West Virginia University School of Medicine.

State Auxiliary Spring Conference In Wheeling, April 20-21

The 1976 Spring Conference and Board of Directors Meeting of the Woman's Auxiliary to the State Medical Association will be held in Wheeling, April 20-21, at Wilson Lodge in Oglebay Park.

The conference will begin on Tuesday, April 20, with registration from 1 to 2 P. M., followed by the meeting of the Board of Directors. There will be a social hour at 6:30 P. M. and dinner at 7 P. M.

The Wednesday program will begin with breakfast at 8:30 A. M. A workshop, under the direction of Mrs. J. L. Mangus of Charleston, President Elect of the State Auxiliary, will begin at 9:45 A. M.

The cost for the dinner will be $10; breakfast, $3. Reservations and a check for these two meals should be sent to: Mrs. Robert O. Strauch, 73 Greenwood Avenue, Wheeling 26003.

ACP Course On Rheumatology, Clinical Immunology

The American College of Physicians (ACP) will sponsor a four-day postgraduate course entitled "Moving Points in Rheumatology and Clinical Immunology," May 12-15, in Pittsburgh. The course, held in conjunction with the University of Pittsburgh School of Medicine, will take place at the Hotel William Penn. It will deal with recent developments in our understanding of the rheumatic diseases, with emphasis on pathophysiology, early diagnosis, and management. Special attention will be directed to the role of immunologic phenomena in the pathogenesis of connective tissue diseases. A wide range of topics in rheumatology and clinical immunology will be covered. The Director of the Pittsburgh course is Gerald P. Rodnan, M. D. For information and registration, contact Registrar, Postgraduate Courses, ACP, 4200 Pine Street, Philadelphia, Pennsylvania 19104.

The American College of Physicians postgraduate courses have been approved by the American Medical Association Advisory Committee on Continuing Medical Education, and may be used to fulfill Category 1 requirements for the AMA Physicians' Recognition Award.

Academic Common Market Waives Out-of-State Study Fees

West Virginia residents can pursue graduate study in nursing at in-state tuition rates at the University of Maryland, at Baltimore, through the Academic Common Market (ACM). Residents of West Virginia also can take graduate study in the neurosciences at in-state tuition rates at the University of Alabama, in Birmingham, through the ACM. Interested persons can obtain further information on this and other programs available to them by contacting Steven H. Smartt, Southern Regional Education Board, 130 Sixth Street, N.W., Atlanta, Georgia 30303.

Medical Meetings

The following is a partial list of national, state and district medical meetings scheduled in the coming months.

1976

April 1-2—W. Va. Chap., Am. Acad. of Pediatrics, Beckley.

April 5-8—Am. College of Physicians, Philadelphia.

April 9-11—W. Va. Chapter, AAFP, Charleston.

April 10-12—AMA-AMPAC Workshop, Washington, D. C.

April 11-15—Spring Session, Am. Acad. of Pediatrics, Philadelphia.

April 25-28—W. Va. Academy of Ophth. & Otol., White Sulphur Springs.

April 26-29—Am. College of Surgeons, Boston.

April 28-30—Medical & Chirurgical Faculty of the State of Md.

April 28-May 1—W. Va. Chapter, ACS, White Sulphur Springs.

April 29-May 2—ASIM, Atlanta.

May 1-2—W. Va. Assn. of Pathologists, Morgantown.

May 2-6—Am. Soc. of Colon & Rectal Surgeons, New Orleans.

May 8—W. Va. Thoracic Soc./W. Va. Lung Assn., Huntington.

May 9-12—Ohio State Med. Assn., Columbus.

May 9-12—Am. Assn. of Plastic Surgeons, Atlanta.

May 10-13—Am. College of Obstetricians & Gynecologists, Dallas.

May 10-14—Am. Psychiatric Assn., Miami Beach.

May 14-17—Am. Ophthalmological Soc., Kamuela, Hawaii.

May 16-19—Am. Thoracic Soc., New Orleans.

May 22-27—Am. Gastroenterological Assn., Miami Beach, Fla.

May 25-29—Am. Gynecological Soc., Hot Springs, Va.

May 27-29—Am. Cancer Society, National Conf. on Radiation Oncology, San Francisco.

June 14-16—Am. Neurological Assn., San Francisco.

June 17-20—Pa. Allergy Assn., Hershey.

June 26—W. Va. State Society of Anesthesiologists, Morgantown.

June 26-July 1—AMA Annual Meeting, Dallas.

June 27-28—Am. College of Preventive Med., Dallas.

Aug. 18-21—109th Annual Meeting, W. Va. State Medical Assn., White Sulphur Springs.

The West Virginia Medical Journal

Vol. 72, No. 5 May, 1976

Appendiceal Cystadenoma And The Acute Abdomen

(A Case Report)

Leonard Prutsok, M. D.; Mansour Djadalizadeh, M. D.; Erlinda DeLaPena, M. D.; And Donald E. McDowell, M. D.

Abstract

Mucinous cystadenoma of the appendix as a rare cause of an abdominal mass has been amply described. Autopsy statistics reveal an incidence of two per one thousand cases for the combined entity of mucocoele of the appendix, which for this paper has been taken to include the following: appendiceal hyperplasia with ectasia, mucinous cystadenoma, and mucinous cystadenocarcinoma.[3] The term appendiceal mucosal hyperplasia has been offered by Higa, *et al*, for cases of appendiceal ectasia with epithelial hyperplasia noted in operative and autopsy appendiceal specimens.[6] These were noted most commonly as incidental findings. In the case presented, we are concerned with the benign tumor, mucinous cystadenoma. The malignant mucinous adenocarcinoma will not be considered, except for the pathologic differentiating criteria.

The presenting symptom of mucocoele of the appendix has most often been right lower quadrant pain, as noted recently in separate series reported by Lauren[1] and Higa.[6] In addition, the absence of a leukocytosis has been reported as a diagnostic feature.[7] With these features in mind, a case history illustrating the acute presentation follows.

The Authors

- **Leonard Prutsok, M. D.; Mansour Djadalizadeh, M. D.; Erlinda DeLaPena, M. D.; and Donald E. McDowell, M. D., from the Departments of Surgery, Veterans Administration Hospital, Clarksburg, West Virginia; and West Virginia University School of Medicine, Morgantown.**

Case History

O. H. presented to the emergency department of the Veterans Administration Hospital in Clarksburg, West Virginia, with the complaint of sudden onset of right lower quadrant pain which struck him as he was walking to the bus stop. This was not associated with nausea, vomiting, change in bowel habits, or urinary symptoms. He denied as well any previous episodes of abdominal pain. Physical examination revealed

Figure 1. The admission abdominal film illustrating the calcified soft tissue mass (arrow).

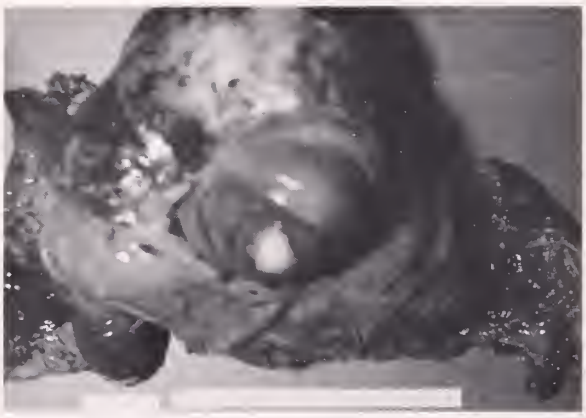


Figure 2. The gross picture of the removed mass measuring 14 centimeters in greatest diameter.

an alert, elderly white male in apparent slight distress with pain which was exacerbated by turning on his right side. The abdomen was rigid with rebound tenderness centered over the right mid-abdomen. There was no definite distention. Bowel sounds were present but hypoactive and no masses could be palpated. The laboratory evaluation revealed a leukocytosis of 14,300 with a moderate "left shift" and plain abdominal films revealed a large, calcified, soft tissue mass in the right lower quadrant (Figure 1).

After a brief initial period of rehydration, the patient was taken to the operating room with a tentative diagnosis of perforated cecal carcinoma. Following induction of anesthesia, with the induced abdominal relaxation, a large, right-sided, mid-abdominal mass became obvious. At exploration, he was found to have a soft, cystic, cecal mass measuring 14 centimeters in diameter within which the appendix was not visualized upon inspection at the operating table (Figure 2). The lesion was removed as an intact mass in combination with a standard right hemicolotomy. No evidence of peritoneal mucus was noted. The

Figure 3. The thick, yellow, gelatinous material within the opened cystic cavity is noted. The arrow points to a patent appendiceal os.

pathologic findings were those typical of mucinous cystadenoma of the appendix, characterized microscopically by villous papillary hyperplasia with the mucosa lined by mucus-secreting columnar epithelium and with only slight cellular atypia (Figures 3, 4, 5). The patient's postoperative course was uneventful and he was discharged on the eleventh hospital day.

Discussion

Mucinous cystadenoma of the appendix is one of the two benign varieties of "mucocoele" of the appendix. The third and malignant form is the cystadenocarcinoma. The entity was first described in 1842 by Rokitansky, and since has been the subject of considerable debate concerning the malignant potential of the lesion and the incidence of the complication of pseudomyxoma peritonei.[1,5,6,9]

The major pathologic criteria for distinguishing the cystadenoma from the cystadenocarci-

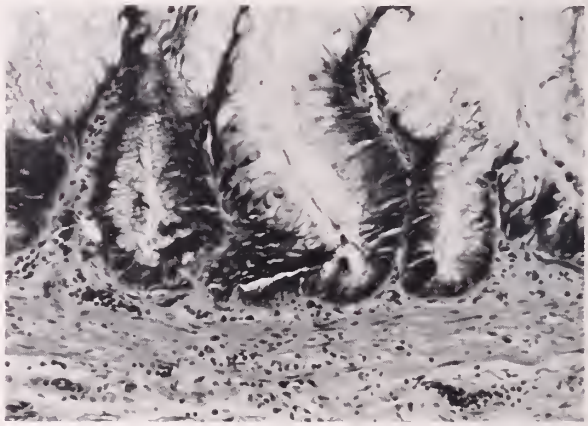


Figure 4. The microscopic section shows mucin-producing glandular epithelium of the colonic type with an intact basement membrane.

noma have been reported by Higa, *et al*, as the presence of stromal glandular invasion and/or the presence of epithelial cells in the peritoneal mucinous implants.[6] They have stressed that epithelial cell implantation in the mucous lesions is a prerequisite for the diagnosis of pseudomyxoma peritonei, and agree with Woodruff and McDonald that pseudomyxoma is a complication of only the malignant cystadenocarcinoma.[6,9]

The series of Lauren, *et al*,[1] taken from cases from the National Surgical Registry of Finland, reveals that the cystadenocarcinoma has a five-year survival rate of 25 per cent. This poor prognosis, in conjunction with the complication of pseudomyxoma peritonei and the inability to make the diagnosis grossly, dictates the need for right hemicolectomy and intact removal of the lesion in most cases.[8]

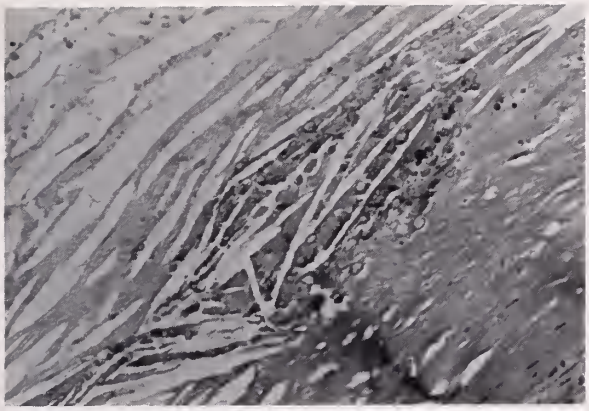


Figure 5. This microscopic section of the cyst wall demonstrates the calcification noted radiographically along with numerous cholesterol clefts.

The clinical presentation in several reported series, as in the case presented, was that of the acute onset of right lower quadrant pain, occurring most commonly in the elderly.[1,6] The lesion has been reported more commonly in women, with patients over 50 years of age constituting 63 per cent of Lauren's series. Right lower quadrant pain was the presenting feature in 78 per cent of his patients when tumors of ovarian origin were excluded.

The presence of calcification in a cystadenoma in which a correct preoperative diagnosis was made was reported first by Vorhaus in 1930.[7] A reference, however, to appendiceal calcification was made by Ogilvie in 1915, when he reported that the presence of a calcified mass in the right lower quadrant "clouded the picture" in the clinical differentiation between a ureteral calculus and a calcified cyst of the appendix. Prior to 1947, only three cases in which a correct preoperative diagnosis of "mucocoele" of the appendix was made were described in the literature.[4]

The distinguishing radiographic features as reported by Akerlund have been "(1) a sharply circumscribed, globular or reniform, soft tissue mass with considerable mobility but firmly attached to the cecum, (2) medial displacement of the cecum by the mass, (3) calcium deposits in the wall or substance of the mass, (4) failure of the appendix to fill with contrast material, and (5) a vortical appearance of the folds of cecal mucosa support."[2]

The pathophysiology of the acute onset of pain has not been established to our knowledge and we can only speculate that the cyst wall may become locally ischemic with progressive dilatation.

Summary

A case of mucinous cystadenoma with radiographically diagnostic features, occurring in an elderly patient with right lower quadrant pain and rigidity and a leukocytosis, is presented as a means of reemphasizing the occasional acute presentation of this chronic disease.

References

1. Aha, A. J.; Hunanen, R.; and Lauren, P.: Benign and Malignant Mucocoels of the Appendix. Histologic Types and Prognosis. Acta Chir. Scand. 139:392-400, 1973.
2. Akerlund, A.: Mukozele in der appendix rontgenologisch diagnostizurlear. Acta Radiol. 17:594-601, 1936.
3. Castle, O. L.: Cystic Dilatation of the Vermiform Appendix. Ann. Surg. 61:583, 1913.
4. Euphrat, E. J.: Roentgen Features of Mucocoele of the Appendix. Radiology. 48:113-117, 1947.
5. Gibbs, N. M.: Mucinous Cystadenoma and Cystadenocarcinoma of the Vermiform Appendix with Particular Reference to Mucocoele and Pseudomyxoma Peritonei. J. Clin. Path. 26:413-421. Jan., 1973.
6. Higa, E.; Rosai, J.; Pizziembonoe, C., and Wise, L.: Mucosal Hyperplasia, Mucinous Cystadenoma, and Mucinous Cystadenocarcinoma of the Appendix. A reevaluation of Appendiceal Mucocoele. Cancer. 23:1525-1541, 1973.
7. Rokitansky, C. F.: A Manual of Pathological Anatomy. English translation of the Vienna edition (1842). Blanchart and Lici, 1855, Vol. 1, p. 89.
8. Watne, A. L.; Trevino, E.: Diagnostic Features of Mucocoele of the Appendix. Arch. Surg. 84:516-524, 1962.
9. Woodruff, R., and McDonald, J. R.: Benign and Malignant Cystic Tumors of the Appendix. Surg. Gynec. Obstet. 71: 750-755, 1940.

Recent Advances In Intracranial Aneurysm Surgery

John L. Fox, M. D.; and G. Robert Nugent, M. D.

Summary

It is the purpose of this paper to emphasize that newer techniques employed in aneurysm surgery have significantly reduced the mortality previously associated with this surgery. No longer should conservative management be considered a therapeutic alternative.

Improvements have resulted primarily from better exposure, minimal retraction of the brain, meticulous dissection of the aneurysm through the operating microscope, hypotensive anesthesia and improvements in the design of clips.

The results of 37 consecutive operative procedures are presented.

The Authors

- **John L. Fox, M. D., Professor of Surgery, Division of Neurosurgy; and G. Robert Nugent, M. D., Professor of Surgery and Chairman, Division of Neurosurgery, West Virginia University Medical Center, Morgantown.**

Introduction

A recent cooperative study has indicated that slightly over half of all non-traumatic subarachnoid hemorrhages are due to ruptured intracranial aneurysms.[1] The diagnosis is being made with greater frequency now that selective four-vessel angiography is being carried out more safely in all cases of subarachnoid hemorrhage (SAH) or cases of suspected intracranial vascular anomaly. The simple diagnosis of "stroke" is no longer satisfactory.

About 30 per cent of patients with SAH due to aneurysm will die prior to hospital admission or within a few weeks of their first hemorrhage. Little can be done for these patients except those who deteriorate due to acute hydrocephalus or an intracerebral hematoma; these are surgically treatable lesions and must not be overlooked. The diagnosis is made by early angiography often assisted by computerized tomography (the "EMI-scan" being the first such CT scan).

The remaining 70 per cent of surviving patients require some method of protecting their brain from a recurrent bleed which often occurs seven to ten days after the SAH. Any patient who survives the SAH in a grade I or grade II state (i.e., they are alert and oriented without severe neurological deficit) deserves to have the aneurysm ligated by the newer surgical techniques as soon as the experienced operating team can be mobilized. In many instances this is within 24 to 48 hours. If the patient is in a grade III or IV neurologic state (in various degrees of obtundation with or without neurologic deficit), is elderly, or has significant medical problems, surgery must be postponed one or two weeks or until the patient is in a satisfactory and stable condition. Previous attempts at early operation in these situations only resulted in an unacceptable mortality rate. The grade V patient is moribund and in most instances will die whether or not surgery is performed.

Initial Treatment

In most instances the family doctor or the emergency room physician is the first to see the patient. Often the patient has a "warning leak" consisting of a sudden, severe headache lasting several minutes or a few hours. It is an unusual headache for the patient and may herald major SAH within a few hours or days. All too often the symptoms are dismissed as a "headache" and no spinal tap is done to verify the presence of a few red blood cells in the cerebrospinal fluid. Early angiography and surgery may be life-saving in this situation and the patient should be transferred to a facility where this can be carried out.

Often these patients are hypersensitive. A *persistent* arterial hypertension is treated by the judicious use of anti-hypertensive drugs such as methyldopa (Aldomet®) and chlorothiazide (Diuril®). A too rapid or extreme drop in blood pressure may infarct an already ischemic brain.

Also important is sufficient sedation, mental relaxation, analgesia for headache, a quiet and darkened room (these patients often have photophobia), a mild laxative, and excellent nursing care. Convulsive seizures may require diphenylhydantom and phenobarbital. A spinal tap will demonstrate bloody CSF; xanthochromia in the supernatent fluid confirms the presence of blood pigments (seen about four hours after the SAH), not seen with a "traumatic" spinal tap. Agents such as epsilon-amino-caproic acid (EACA or

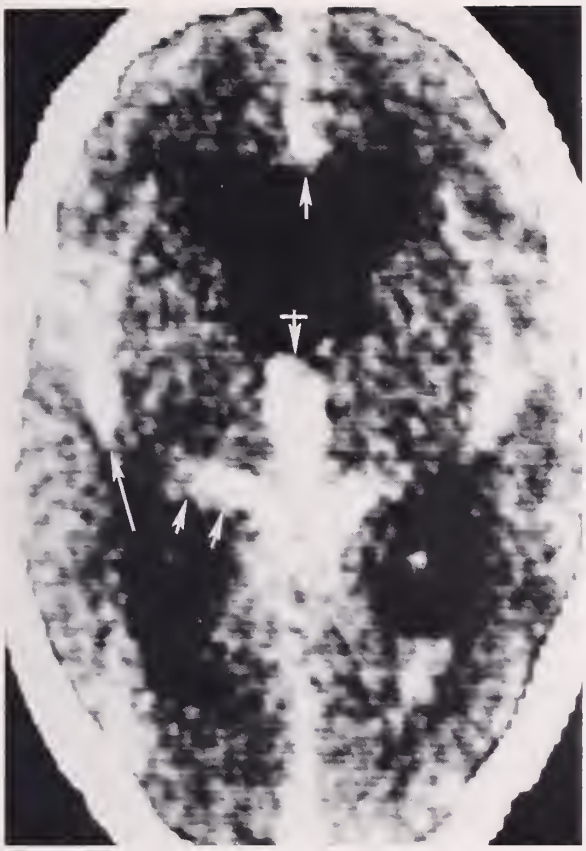


Figure 1. Computed tomogram (horizontal cut) in a patient with subarachnoid hemorrhage. Note blood (white density) in subarachnoid cisterns: single small arrow, interhemispheric fissure; double small arrows, ambient cistern around midbrain; and long arrow, Sylvian fissure. There also is blood in the third ventricle (crossed arrow). The black spaces are dilated lateral ventricles (hydrocephalus).

Amicar®) are used by some to reduce the tendency for clot lysis in the aneurysm wall and may reduce the incidence of recurrent bleeds while waiting for the appropriate time to begin surgery.

Angiography

The timing of cerebral angiography depends on many factors. The decision should be made by the consulting neurologist or neurosurgeon. A deteriorating patient requires urgent angiography to rule out a life-threatening hematoma or hydrocephalus. This diagnosis also can be made by the new CT scan (Figure 1) although the latter will not yet pinpoint the aneurysm itself. In a Grade I or II aneurysm patient, early angiography is necessary to provide the diagnosis and aid the program of therapy. In a stable grade III or IV aneurysm patient, angiography should be delayed a few days to avoid disturbing a delicately balanced intracranial situation as the patient improves.

The route of angiography depends on the site of the suspected aneurysm, the preference of the angiographer, and the hospital facilities available. Subtraction techniques (Figure 2), along with occasional stereoscopic views, tomographic cuts, or magnification methods, will enhance the information obtainable. The neck and configuration of the aneurysm, parent vessels, surrounding perforating arteries feeding the brain stem. and presence of vasospasm are critical factors in planning the surgical attack (Figure 2). At least 15 per cent of cases have multiple intracranial aneurysms. Of all intracranial aneurysms identified on angiograms about 25 per cent occur on the middle cerebral arteries, 25 per cent on the internal carotid arteries, 25 per cent on the anterior cerebral arteries, and 15 per cent on the vertebro-basilar circulation.

Surgery

The previously appalling high mortality rate for the ligation of intracranial aneurysms is no longer acceptable. The operating room team accustomed to treating these patients on a regular basis (at least 20 or more aneurysm cases per year by the same surgeaon and team) has become a reality.

Advances in neuro-anesthesiology have permitted the surgeon to work on a relatively slack brain without fear of aneurysmal rupture. Controlled ventilation with close monitoring of blood gases is probably the safest method of reducing intracranial pressure. Hypertonic mannitol is used, but in lesser amounts now to avoid a rebound in pressure postoperatively. Mannitol also tends to reduce the tendency for blood to sludge in spastic vessels. CSF drainage is standard practice. Corticosteroids seem to reduce cerebral edema (omit in patients with a peptic ulcer history!).

A major break-through has been the effective use of rapidly acting hypotensive agents. Aneurysm surgery with the (normotensive) patient's mean arterial pressure reduced to 30 to 40 mm. Hg for many minutes is commonplace now. This not only tends to reduce intracranial pressure but also allows safer dissection of the aneurysmal sac.

The importance of the neurosurgical nursing team cannot be over-emphasized. Since the operating microscope and a new group of mico-instruments have become a part of the surgeon's armamentarium, the scrub nurse knowledgeable in their care must be one who works regularly with the surgeon. She observes the television monitor displaying the intracranial tissues seen by the surgeon and uses this as a guide for providing the bipolar forceps, the microscissors, the dissectors, or the clip-applier.

It has been only since the late 1960's that the operating microscope has been used on a regular

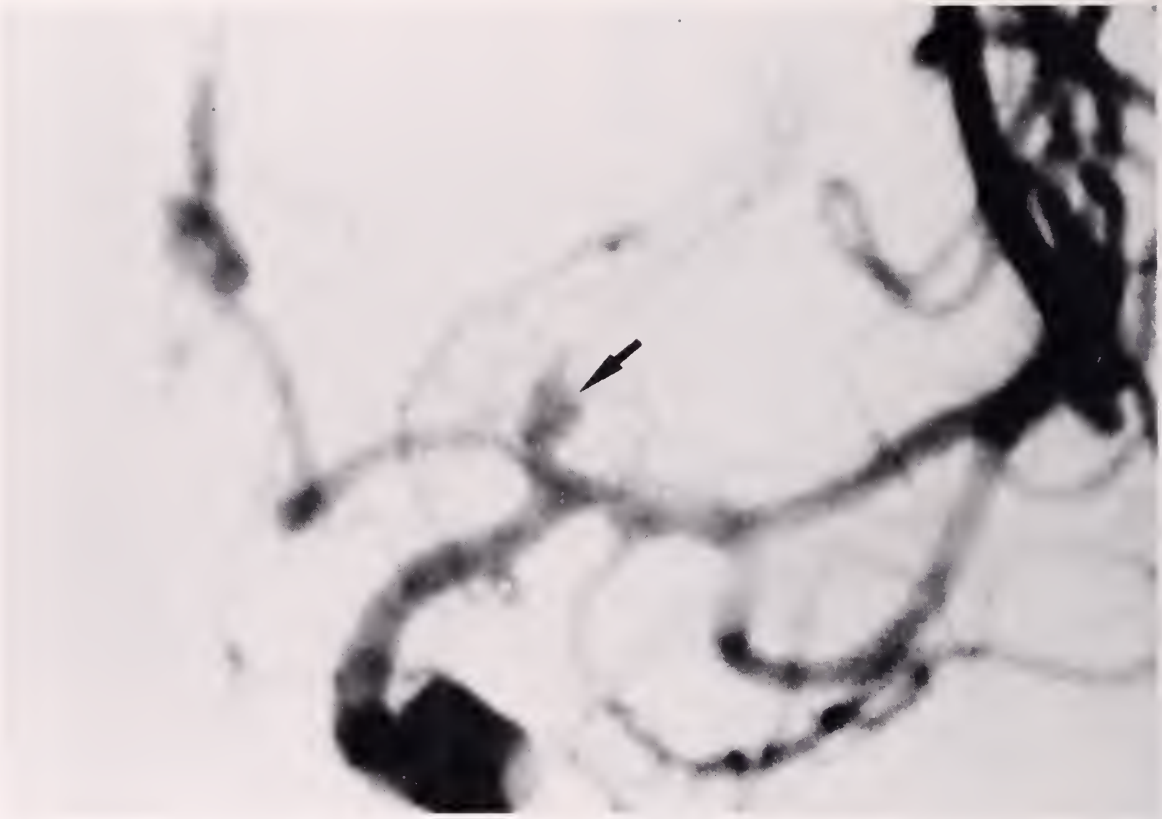


Figure 2. left carotid angiogram, AP view, subtraction technique. Note aneurysm (arrow) arising from origin of horizontal part of anterior cerebral artery. The aneurysm is surrounded by a leash of vital perforating arteries arising from the horizontal segments of the anterior cerebral and middle cerebral arteries.

basis for these problems. The dramatic reduction in mortality rate from 20 to 30 per cent to two to five per cent in specialized hands has convinced many neurosurgeons that modern intracranial aneurysm surgery must be performed with the assistance of magnification and microinstruments.[2] This permits a smaller craniotomy, less brain retraction, and better delineation of the anatomy. One of the causes of postoperative complications has been excess brain retraction to obtain exposure to the circle of Willis. The surgeon trained in microtechnique requires less than two centimeters of brain retraction from the base of the skull.

One of the authors (GRN) has used these microsurgical techniques on 37 consecutive intracranial aneurysm procedures of the anterior circle of Willis with no mortality and with only two patients being made worse by the operation. Both of these suffered from a hemiparesis following the operation. In one, two aneurysms were clipped during a single procedure which required 90 minutes of hypotension. This patient had a lesser hemiparesis prior to the surgery. The other patient is self-sufficient and is taking care of her home. Some spasticity is her major problem.

References

1. Sahs, A. L.; Perret, G. E.; Locksley, H. B., and Nishioka, H.: Intracranial Aneurysms and Subarachnoid Hemorrhage. A Cooperative Study. Philadelphia, J. B. Lippincott Co., 1969.
2. Yasargil, M. G., and Fox, J. L.: The Microsurgical Approach to Intracranial Aneurysms. Surg. Neurol. 3:7-14, 1975.

Medical Grand Rounds

From the West Virginia University Medical Center

Edited By

Raymond B. Weiss, M. D.
Associate Professor of Medicine

Medical Management Of Rheumatoid Arthritis

Discussants: Anthony G. DiBartolomeo, M. D.; and Lewis G. Dickinson, M. D.

Lewis G. Dickinson, M. D., Medical Resident, WVU Hospital.

Case Presentation

A 71-year-old white, retired steel worker and coal miner, was seen in the Arthritis Clinic at West Virginia University Medical Center because of a two-year history of joint pain. Eight years previously he had had an episode of pain and swelling in his knees which was treated successfully with IM corticosteroids.

In 1971, he first noted morning stiffness and pain in both shoulders. Over the next two years, the knees, ankles, wrists, elbows and neck also became involved. He first had olecranon bursal swelling and subcutaneous nodules in 1973. For about two years, he has had numbness in all digits of both hands, which was worse at night, without lancinating pains. He denied numbness in his feet. His appetite was good, and he denied fever, skin ulcers, chest pain, cough, hair loss, and dry mouth. He occasionally had dry, itchy eyes without redness.

He was divorced and lived alone in a house with no indoor toilet. His brother lives close by and is able to help with the chores and marketing. He is a former alcohol abuser who still occasionally drinks in binges.

In 1974, he began having right-hip pain radiating to the groin; the pain was worse on weight-bearing and worse at night. He denied any trauma to the right hip.

His only medication had been self-administered aspirin, eight to 10 tablets daily.

Physical examination revealed an obese male with pain on moving any joint. Joint examination showed swelling and warmth over the proximal interphalangeal and metacarpophalangeal joints of both hands with poor fist formation (Figure 1). There was marked synovial thickening on the dorsum of both wrists with moderate limitation of motion. Tinel's sign was not present. Multiple firm subcutaneous nodules were present along the ulnar surface of both elbows. Both olecranon bursae were enlarged and fluid-filled, and nodules were palpable in the wall of the left olecranon sac (Figure 2).

Examination of the neck showed moderate limitation of right and left lateral flexion. The right hip was quite limited in internal and external rotation with normal motion in the left hip. Both knees were warm and swollen and had a 20 degree flexion contracture. No skin ulcers or vasculitis lesions were present. Deep tendon reflexes were normal, but there was decreased sensation in the distribution of both median nerves.

Upon admission to the hospital the patient was found to have a sedimentation rate of 56 mm.

Figure 1. Hands and wrists of the patient, showing swelling of the metacarpophalangeal and proximal interphalangeal joints and of the extensor tendon sheaths on the dorsum of the wrists. These findings are all typical of RA.

per hour, a hemoglobin of 10.8 gm. per dl., and a serum albumin of 3.1 per dl. A latex fixation test for rheumatoid factor was positive in a titer of 1:1024, and antinuclear antibodies were not present.

He was begun on a program of hot packs, whirlpool baths, and passive range of motion, and his aspirin dose was increased to 16 tablets daily in divided doses.

On his fifth hospital day he was given a test dose (10 mg. IM) of gold sodium thiomalate (Myochrysine) with no untoward effects, and a week later he was given 25 mg. more. He later was discharged to be followed in the Arthritis Clinic.

Anthony G. DiBartolomeo, Assistant Professor of Medicine, Division of Rheumatology.

Rheumatoid arthritis (RA) is a rather common disease with a point prevalence in the world population of approximately 2 per cent. This means that in the United States there are four to five million people with RA. These patients require a great deal of medical attention and the cost of this medical care is staggering. The annual cost to the economy of joint disease is two billion dollars in lost wages and 1.5 billion dollars for medical care. The care of these patients is best carried out by a team approach with the primary physician and rheumatologist working closely with the orthopedic surgeon, the physical therapist, the social worker, and the home health worker.

During the course of the initial evaluation of a patient with RA, the team approach will bring out potential problems, particularly the effect of the disease on the patient's daily life. Since RA is a chronic disease which usually does not shorten life, these problems must be dealt with in order to best help the patient. The difficulties that can frequently be overlooked during a good scientific medical workup include the physical arrangement of the house—particularly whether stairs separate important rooms, whether the house has indoor plumbing, whether there is a shower or only a bathtub, how much housework the patient must do, and whether there are supportive family members or friends to help with such chores as the marketing and transportation to the clinic.

In the area of interpersonal relations, it is important to include family members in the discussion of therapy, so that they understand the reasons for "all those pills," the frequent physician visits, and the need for frequent rest periods during each day. One important point that is frequently overlooked is sexual adjustment. Arthritis of the hips or knees, or the general malaise that accompanies RA, makes sexual activity difficult. Changes from the usual position for intercourse may get around the mechanical problems in the hips or knees, but it may be difficult to overcome a couple's prejudices. The patient will almost never broach the subject himself, however, so it is up to the health care professionals to include guidance for this problem as part of comprehensive arthritis care.

Aspirin Basic Therapy

The goal of all treatment is to alleviate pain, preserve function, and prevent deformity. The treatment perhaps best understood by most physicians is pharmacologic therapy, and the basic pharmacologic therapy is aspirin.

The medicinal value of the bark of the willow tree was first noted in 1863, when it was first used to treat fever. In 1876, willow bark extract was first used in rheumatic fever because it was

Figure 2. The forearm, showing a swollen olecranon bursa and subcutaneous nodules along the ulna. Subcutaneous nodules are diagnostic hallmarks of RA.

reasoned that plants and trees that grew in damp places would be the logical source of a cure for complaints that were made worse by dampness and cold.

Synthetic aspirin was introduced in 1899. Americans now consume about 30 tons of aspirin daily, an astounding figure! Aspirin is absorbed largely in the stomach and small bowel as intact aspirin, and up to 25 per cent of a dose of aspirin is in the blood five to 15 minutes after tablets. The maximal blood level of salicylate occurs about two and one-half hours after the oral dose, and aspirin is still detectable eight to 12 hours after a 600 mg. dose. After 48 hours, no salicylate metabolites are found in the urine, regardless of how long the patient has been taking aspirin, emphasizing that aspirin is quickly metabolized and excreted, and is not stored. The mode of action of aspirin is still not certain, although with the eruption of enthusiasm for the study of the prostaglandins, there has been some recent work showing aspirin inhibition of the inflammatory effects of these compounds.

The toxicity of aspirin is well known, particularly to gastroenterologists. In the majority of patients aspirin causes an average GI blood loss of 4 to 5 ml. per day, but major GI hemorrhage is uncommon, considering the amount of aspirin taken daily. This blood loss is not a significant factor in the anemia commonly seen in RA. GI intolerance can usually be avoided by giving a high quality aspirin tablet such as Lilly or Squibb Aspirin, since breakdown of the aspirin in the tablet into acetic and salicylic acids may be responsible for much of the irritative effect on the gastric mucosa. Another way is carefully advising the patient never to take aspirin without eating or drinking something. Even a glass of water may help avoid stomach upset. The other common toxic effect of aspirin is eighth-nerve damage. This shows up first as tinnitus and later as high-tone deafness, which is usually reversible if the aspirin is stopped.

Monitoring of serum salicylate levels is helpful in judging whether the patient is taking enough aspirin or, indeed, whether he is following instructions at all. Therapeutic levels are in the range of 15 to 25 mg./dl. Serum salicylate levels have demonstrated that there is great unpredictability in the dissolution and absorption of enteric-coated aspirin tablets, making them less desirable forms of salicylate therapy. The usual aspirin dosage is eight to 24 tablets in divided doses.

Indomethacin The Next Mainstay

The next mainstay in oral therapy is indomethacin (Indocin), an indole acetic acid compound. Its structural similarity to serotonin probably accounts for many of its side effects, particularly dizziness, flushing, feeling of depersonalization, and headache. Indomethacin caused GI side effects in about 20 per cent of the patients in one study, with about two per cent having peptic ulcer. Peak plasma levels of indomethacin are reached promptly, and the plasma half-life is 90 minutes. About 70 per cent of the drug is excreted in the urine, and 30 per cent in the stool. It is not metabolized. The mechanism of action is by prostaglandin inhibition. As with aspirin, the drug should never be taken on an empty stomach.

Indomethacin has been particularly useful in alleviating morning stiffness when given in a dose of 50 to 75 mg. at bedtime. In addition, this nighttime dose at the start of therapy may help avoid the serotonin-like side effects when daytime doses of the drug are added. The usual dose is 25 mg. BID or TID and 50 mg. at bedtime. There appears to be no advantage to doses exceeding 150 mg. daily.

Phenylbutazone (Butazolidin) has effects similar to those of indomethacin, but because of the rare occurrence of aplastic anemia associated with the drug, it has little place in the management of RA.

Ibuprofen (Motrin) was extensively studied in Europe before being released in the United States in 1974. It has many fewer side effects than aspirin, but also appears to have a much smaller anti-inflammatory effect than aspirin. Initially, the drug was used in doses of 1200 to 1600 mg./day and, in this dose, had modest analgesic effect, but little anti-inflammatory effect. Recent studies have shown that doses of 2400 to 3200 mg. per day (6-8 tablets) may be necessary to get good anti-inflammatory action. This amount of Motrin would cost the patient about 90 cents to $1.20 per day.

Naproxen, about to be released by Syntex Corp., appears to be a better anti-inflammatory drug than Motrin, with no more side effects. However, clinical experience may change this evaluation. Acetaminophen and propoxyphene (Darvon) compounds are useful for their mild analgesic effects.

Hydroxychloroquine (Plaquenil), originally developed for treatment of malaria, has been used for many years and has shown a definite but mild anti-rheumatic effect. It has relatively few side effects, the most important of which is

retinopathy caused by deposition of the drug in the choroid of the eye. Retinal toxicity can be detected early by subtle changes in color vision, and retinopathy is almost always reversible when the drug is discontinued. The incidence of eye problems is quite low when the dose is kept at or below 200 mg. daily. No effect is noted from hydroxychloroquine for at least two months after starting the drug. Its mechanism of action may be by stabilization of lysosomal membranes.

Gold Treatment Benefits

The mainstay in the pharmacological treatment of RA is gold. In the 1920's it was known that gold salts inhibited growth of tubercle bacilli *in vitro* and that gold benefited some patients with tuberculosis (TB). Because of some histologic similarities between RA and TB it seemed reasonable to Forestier, in 1927, that gold might benefit rheumatoid patients. Subsequently, a number of reports supported the use of gold, but it was not until 1960 that the double-blind study conducted by the Empire Rheumatism Council demonstrated clear benefit in the gold-treated patients as measured by functional capacity, grip strength, the number of analgesic tablets taken daily, the titer of rheumatoid factor, and the erythrocyte sedimentation rate. More recent studies have confirmed these findings and have also demonstrated a lack of progression of radiographic lesions and even, in a few patients, healing of erosions in involved joints.

Gold is excreted primarily by the kidneys; fecal excretion is small. However, the majority of the dose of gold is retained in the body. Large amounts of gold can be found in the synovium, in the kidneys, and in the skin. Of a group of patients with RA who are treated with gold, about 25 per cent will have to stop the drug because of toxicity, about 25 per cent will not benefit, and about 50 per cent will show significant improvement. Some studies have reported a higher incidence of toxicity, but this was related to the higher doses used in the studies as well as their definition of toxicity.

The most common type of gold toxicity is mucocutaneous reactions. The skin rash can take almost any form, but it is virtually always pruritic. It is usually localized, but may be generalized. The most serious dermatologic reaction is generalized exfoliative dermatitis. It may be fatal, but it usually responds to systemic corticosteroid treatment. Oral ulcerations may accompany the dermatitis or may occur alone as a sign of toxicity. Gold can cause a toxic interstitial nephritis, but this is usually gradual in onset with proteinuria occurring early. Bone marrow depression can also be caused by gold salts. This can take the form of pancytopenia, or may simply depress formation of one element in the marrow. The mechanism for this effect is unknown.

Virtually every case of gold toxicity, however, is reversible upon stopping the drug. In severe cases of toxicity, chelating agents such as GAL, EDTA, or penicillamine may be used to deplete tissue levels of gold rapidly, but this is rarely necessary.

Effects Of Gold Delayed

Gold, in the form of soluble thioglucose or thiomalate salts, is given intramuscularly in a small initial dose of 10 mg., with increments to 50 mg. weekly. Beneficial effects of gold are quite delayed, frequently not appearing until three months or more after starting treatment, so it is recommended that a total of 1000 mg. be given in 20 weekly injections before gold is judged a failure. However, many patients will begin to show a response with improvement in function and fewer inflamed joints in less than three months.

Soon after improvement begins, the dosage schedule can be changed to 50 mg. every two weeks. With further improvement the intervals can be lengthened to three, and then to four weeks. The best evidence indicates that a gold-responsive patient should then continue to receive maintenance gold at intervals of four to six weeks indefinitely. For the first eight to 10 weeks, the patient should be followed with a white blood cell count, a platelet estimate, and a dipstick test for urine protein before each injection. As the course of treatment progresses, these lab controls can be diminished in frequency to the point that a patient on maintenance gold need be tested only every three months. The gold should be stopped at least temporarily if a pruritic rash occurs, if greater than 1+ protein is found in the urine, if the WBC drops below 4000, or if the platelet count falls significantly.

Some patients on maintenance gold may have a flare of arthritis. If this occurs, it may be helpful to increase either the dose of gold or the frequency of injections; i.e., to "backtrack" on the schedule.

In the event of a toxic reaction in a patient who was responding well to gold, it is justified to try to restart the gold after the reaction has subsided. This can usually be done successfully by starting at 5 mg. every two weeks, and increasing 5 mg. every two weeks to a total of 25 mg.

Penicillamine Effective

Another drug that the Empire Rheumatism Council has shown to be effective is penicillamine, which has therapeutic effect comparable to that of gold compounds. It has been shown to arrest progression of joint damage in a controlled study. Toxic effects are frequent and are strikingly similar to those of gold, namely, rash, oral ulceration, nephrotic syndrome, and bone marrow depression. As with gold, these are reversible with cessation of therapy. Penicillamine also has some other troublesome side effects, notably GI upset and loss of taste sensation. Many of these effects can be avoided by going "low and slow" when starting the drug.

Because the effect of penicillamine may be delayed one or two months, the best starting dose is 250 mg. daily with an increase to 500 mg. daily after four weeks, if no response occurs. Further increases should be at eight-week intervals if necessary. Penicillamine possibly exerts its anti-inflammatory action by uncoupling immune complexes, thus aborting the inflammatory cycle in the joint.

Corticosteroids

Corticosteroids were widely regarded as the drug that would cure arthritis as well as a myriad of other diseases when they were first used at the Mayo Clinic in 1949. However, it quickly became apparent that not only were there serious problems associated with the use of these drugs, but they exerted no beneficial long-term effect on the joint disease.

Steroids should be used in the presence of pericarditis, rheumatoid vasculitis, severe vasculitic leg ulcers, and Felty's syndrome. In addition, in patients who are beginning treatment with gold or penicillamine, where onset of action may be delayed, small doses of steroids may keep the patient active until the more efficacious treatment begins to take effect. Chronic use of steroids should be avoided, if at all possible.

Similarly, intra-articular injection of steroids can be very helpful, particularly when the patient is responding well to other treatment, but has a flare of activity in only a few joints. The steroid should be in the acetylated form (e.g., Aristospan or Hydeltra—TBA) to minimize systemic effect and to keep the medication in the joint. It is usually helpful to remove as much synovial fluid as possible before injecting the drug, both to reduce intra-articular pressure and to lessen the dilutional effect of 1 cc. of steroid in 30 or 40 cc. of synovial fluid. Injection treatment should be used sparingly because there is some systemic absorption and effect from the steroids, and because animal studies have shown harmful effect on cartilage and supporting structures from too-frequent injection.

Cytotoxic Drug Therapy

Finally we come to the use of cytotoxic drug therapy in RA, a use that still should be considered investigational, although the drugs are generally available. The three drugs most commonly used are cyclophosphamide (Cytoxan), azathioprine (Imuran), and methotrexate. Cyclophosphamide has been demonstrated to stop the disease process in the joints, and definite improvement has occurred with the other two drugs as well. They are also useful in rheumatoid vasculitis. The risks of these drugs, however, permit their use only in patients who either cannot tolerate or do not respond to more conventional—and safer—therapy.

Physical Medicine

The next mode of therapy, one that is perhaps less familiar to most physicians, is physical medicine, which directs its attention to the joints and muscles themselves. Physical medicine includes physical therapists and occupational therapists as important members of the health care team. Their goals are to preserve function and prevent deformity. A careful estimate of the patient's functional capacity, including range of motion of joints and strength of muscles, is the basic evaluation. A red, swollen, inflamed joint is painful on motion, and rest has been shown to be effective in "cooling off" a "hot" joint. In addition to bedrest, whirlpool treatments and paraffin baths are useful. The relative virtues of hot versus cold packs are still being debated, but most patients feel relief from one or the other.

When inflammation has subsided, efforts are directed at preserving and improving function by active and passive range of motion exercises. Ambulation aids such as a cane, crutches, or a walker, may be necessary to reduce stress on a particularly painful joint, and efforts are made to strengthen muscles in order to improve tendinous support for damaged joints. Similarly, podiatric assistance may distribute weight more evenly over the foot by the use of metatarsal bars or shoe padding.

There are a number of devices available to assist the arthritis patient in his self-care and activities of daily living. These devices include attachments to elevate chairs so that a patient may sit and rise more easily, an elevated plastic toilet seat for the same reason, devices for improving hand grip on door knobs, cooking and eating utensils, "reachers" for retrieving dropped objects, shoes with Velcro closures, and old

fashioned button hooks. A good physical therapy treatment plan will include educating the patient in the use of the appropriate devices.

The orthopedic surgeon completes the comprehensive care team, and his importance lies in his ability to restore some measure of function to a severely diseased joint. In addition to actual joint replacement there are procedures for debridement and stabilization of diseased joints that are most valuable in the long-term management of RA patients.

Quackery

I would now like to mention a few words about unproven methods of treatment—or quackery. Patients with joint diseases spend about 400 million dollars yearly on these remedies. There is no evidence to support the extravagant claims of "cure" of arthritis by diet, and trials of Vitamin E proved there was no benefit in this therapy. A number of so-called "Chinese medicines" have been surreptitiously brought into this country, and very optimistic claims have been made for them. Many of them contain phenylbutazone, however, and at least one death from aplastic anemia has been reported in association with their use.

Instances of subsidence of RA disease activity have been reported following massive stinging by bees, but these are anecdotal reports. Recent claims that RA is a protozoal disease have come from Great Britain, and cures are claimed after a course of treatment with clotrimazole, an antihelminthic drug. Both these claims are currently being investigated by controlled trials in reputable medical centers.

And, lastly, there are a number of opportunistic practitioners who have set up clinics in Mexico, just across the border from the United States. These practitioners deny they are administering "cortisone," and then dispense prednisone or some other corticosteroid preparation in high dosage. The result is the well-known end result of high-dose steroid therapy, and the family physician or rheumatologist is faced with a very difficult management problem.

Many of these quackery practices flourish because of ignorance. So much more effort must be directed at educating the public and at the continuing education of physicians.

Suggested Readings

1. Peterson, L. F. A.; Bryan, R. S., and Combs, J. J., Jr.: Surgery for Arthritis of the Knee. Bull. Rheum. Dis. 25:794-797, 1974-75.
2. Bluhm, G. B.: The Treatment of Rheumatoid Arthritis with Gold. Sem. Arthritis Rheum. 5:147-166, 1975.

Manuscript Information

Manuscripts to be presented for publication in *The West Virginia Medical Journal* should be typewritten, triple-spaced, on one side only of firm (no onion skin or flimsy), standard letter sized (8 1/2 by 11 in.) white paper. Wide margins (at least 1 1/4 in. on left) should be left free of typing. On the first or title page should be shown the title of the article, the name (or names) of the author, and his degrees. Pages should be numbered consecutively, the page number being shown in the right upper corner along with the surname of the author.

Authors are requested to submit a carbon copy with the original.

Illustrations should be numbered and their approximate locations shown in the text. Each should be identified by placing on its back the author's name, its number and an indication of its "top." Drawings and charts intended for reproduction should be done in black (India) ink on pure white. Photographs should be on glossy paper and minimum of about 5 by 7 in. in size. A legend should be provided for each illustration and, preferably, attached to it.

All scientific material appearing in *The Journal* is reviewed by the Editorial Board. Manuscripts should be mailed to The Editor, West Virginia Medical Journal, Box 1031, Charleston, W. Va. 25324.

Special Article

The Health Of General Robert E. Lee

Edward J. Van Liere, M. D., Ph. D.

ALTHOUGH General Robert E. Lee has been dead over 105 years, his name is still magic in the South, and indeed, many people in the North admire his sterling character. When General Lee resigned from the Army of the United States and joined the Confederate forces, he lost citizenship in his mother country. As a consequence, he was a man without a country for 110 years. It appears that on October 2, 1865, while residing in Lexington, Virginia, he signed a required loyalty oath, but the document for some unknown reason vanished. The missing document was found about five years ago in a cardboard box of Civil War-era State Department papers. This finding started a new drive to grant General Lee's original request. Recently, by vote of the Congress of the United States and by action of President Gerald Ford, full citizenship was restored to General Lee.

It is quite fitting that his citizenship has been fully restored, for following the War Between the States he played a leading part in urging the soldiers of the South to lay down their arms and return to their farms and peaceful pursuits. It has been stated that more than any other American, General Lee kept the tragedy of the war from being a continuing national calamity. He also gave distinguished service for five years as President of Washington College at Lexington, Virginia (later named Washington and Lee University).

Much has been written about the military genius of General Lee, but what has been written about the state of his health during his lifetime, in my judgment at least, has never received wide publicity. The writer of this essay has always thought of him as a graceful, athletic appearing man of splendid physique and glowing health. Many of his photographs show him seated on his famous iron-gray horse, Traveler, and his erect carriage and dignified air make him appear as if he were in splendid health and capable of withstanding considerable hardship. This was undoubtedly true in his younger years, but in his middle fifties, when the war was about half over, he suffered some serious cardiovascular disorders which some people believe might have had an effect on his later battles.

The Author

- **Edward J. Van Liere, M. D., Ph. D., Emeritus Dean and Emeritus Professor of Physiology and Biophysics, West Virginia University School of Medicine, Morgantown.**

First Illness At Age 42

It is of medical and cultural interest to outline briefly the major illnesses from which General Lee suffered during his lifetime. He was born in 1807 and presumably enjoyed superb health until 1849, at which time he was 42 years old. In July of that year he developed malarial fever while engaged in supervising the construction of Fort Carroll on the Patapsco River. There is some reason to believe that he was stricken with the type of fever produced by *Plasmodium vivax*. The characteristics of this disease is that exacerbations may occur when the subject is under great stress, especially if he resides in a hot climate. At the time of his illness, quinine was, of course, available, but it apparently did not entirely cure his type of malaria, a not uncommon occurrence. The disease became so severe that he was forced to go to his home and rest, and did not return to Baltimore until late in August.

On the whole, he made a fairly good recovery, but it has been mentioned[1] that exacerbations of his malaria recurred during the hard campaigns of the summer of 1862 at the time of the battle of Antietam, and perhaps also the following summer. Whether these exacerbations seriously interfered in any way with his campaign is not known.

According to Freeman,[2] malaria was his first and only illness prior to 1863 of which there is any record. At the outbreak of the war in 1861, General Lee was only 54 years old. Even in those days he could not be called an old man; at the present time we would consider him a man of middle age. In the spring of 1863, General Lee was planning on carrying the war into Maryland and Pennsylvania, but, unfortunately, he became ill at a crucial point in planning the campaign,

his first illness as Commander of the Army of Northern Virginia. At that time he was 56 years old.

'Rheumatic Twinges And Weakness'

It seems that General Lee had been troubled with a stubborn insomnia. He contracted a severe sore throat infection and suffered pains in his arms and chest. It was believed that his paroxysms were associated with angina pectoris, secondary to a pericarditis. In any event, he was quite ill and it became necessary for him to move out of his bleak quarters and to be cared for by Dr. Lafayette Guild. The latter became ill and the General was placed under the care of Dr. Samuel M. Beamis, a distinguished New Orleans surgeon who was serving with the Confederate forces. On April 10, 1863, Doctor Beamis wrote, "For over a week past he has been sick. His physician was taken sick and I visited him every afternoon."[3] General Lee, "with white beard all over his face and white hair," impressed his physician as being prematurely old.

The General was kept in bed for several days and he stated, "They are tapping me all over like an old steam boiler before condemning it." After about a week his symptoms ameliorated, but he still suffered with what his medical advisers termed "rheumatic twinges and weakness." It is highly probable that these so-called rheumatic twinges were produced, in part at least, by angina pectoris. One wonders whether he should have been kept in bed for a longer period. He was partially incapacitated by his illness for about a month. Shortly after this, the battle of Chancellorsville was fought and won by the Confederates, but unfortunately for the South, General Stonewall Jackson was accidentally killed by his own men. This was a severe loss to General Lee and probably added greatly to his mental stress. Freeman spoke of Jackson as "Lee's right arm."

Abdominal Pain And Diarrhea

In the spring of 1864, General Grant started his campaign, known as the Battle of the Wilderness. General Lee surmised that General Grant was posed to march on Richmond. This, of course, was a grave threat and required Lee's closest attention, but it is definitely known that General Lee became acutely ill during the night of May 23-24 of that year. He suffered from acute abdominal pain and diarrhea. It is not known whether there was any bleeding from the bowel, but at any rate he was quite ill, and on May 28 was taken to a house which stood near his headquarters for rest and cure. It was said that his disposition became irritable and he often repeated, "We must strike them a blow." He was still so weak from his diarrhea on June 1 that he had to be transported in a carriage to the Battle of Cold Harbor. It seems that Doctor Guild prescribed port wine for the General, but he refused to use this prescription. His aversion to alcoholic beverages is well known. By the close of the Battle of Cold Harbor, Lee's illness seems to have been abated. This battle, incidentally, was his last great field victory.

Dr. R. E. Mitchell, Jr.[4] has written recently a critical essay on Lee's intestinal illness, emphasizing that with only snatches of information available a precise diagnosis would not seem possible now. He lists a number of possible conditions which might have been responsible for his difficulty. Among those are: An actual infection of the gastrointestinal tract (bacterial, viral, or parasitic); early symptoms of systemic infection, such as regional enteritis or ulcerative colitis; and fulminant dysentery, which may be ushered in by the last two mentioned conditions, especially when the patient is subjected to acute or chronic stress situations. He also suggests that pancreatitis and diverticulitis need also to be considered, but more or less rules out *Vibrio cholera* and *Escherichia coli*, as well as Whipple's disease. He points out that it is unlikely that General Lee had a viral enteritis because, as a rule, this condition lasts only two or three days.

Acute Bacillary Dysentery

Doctor Mitchell believes that there is a strong possibility that General Lee might have had an acute bacillary dysentery and that especially Salmonella, or Shigella, or *Endamoeba histolytica* could be highly suspected in this instance. It is further noted that the weakness and debilitation experienced by Lee could be due not only to his excessive diarrhea, but also to the anorexia associated with fever and leukocytosis. Doctor Mitchell's final conclusion is that, with the meager data at hand, General Lee did suffer from an acute bacillary dysentery, type not further known, which was aided and abetted by stress.

It is a pity that General Lee had to endure a long siege of abdominal stress, especially during a critical time, at least critical for him. In those days there were no satisfactory drugs for the treatment of bacillary dysentery; opium and tannin-bearing herbs were used to check the diarrhea. These drugs were of dubious value indeed, since it is now recognized that in most instances diarrhea is regarded as a protective mechanism and drugs should not be used to slow intestinal peristalsis. On the other hand, preparations should be administered which combat bacterial invasion of the wall of the bowel.

During the past few years, considerable progress has been made in the therapy of bacillary dysentery. The crucial importance of replacing fluid and electrolyte loss is now widely recognized. There are also certain therapeutic agents which are quite efficacious, such as soluble sulfonamides and certain antibiotics (tetracycline and ampicillin). These latter agents, as a rule, bring bacillary dysentery under control within a few days. Had these been available when Lee suffered his abdominal ailment, it is quite likely that he would have been able to mount Traveler and ride along with his Army to the Battle of Cold Harbor, instead of having to employ a carriage.

Arthritis And Angina Pectoris

During the period between the Battle of the Wilderness and the surrender at Appomattox, General Lee presumably had no major illnesses. In his letters, however, he constantly registered complaints of muscle and joint pains which he referred to as sciatica, lumbago, and rheumatism. One wonders whether perhaps his major trouble was angina pectoris. It is of interest that the late Dr. Lewellys Barker of Johns Hopkins concluded from his study of medical records of General Lee that he suffered arthritis of the shoulder joints and spine, and also had angina pectoris.

It is noteworthy that, on the whole, General Lee received excellent medical care during his major illnesses. At the time, however, but little was known about the diseases which plagued him. The consulting physicians who attended him, Doctors Guild, Bemis, and Buckler, were all capable and well-recognized clinicians. Unfortunately, the use of nitrites for anginal pain was not yet introduced, and the same was true of the salicylates and steroid therapy for arthritis. Undoubtedly, much of his discomfort might have been alleviated had these preparations been available, although they would not have cured his illnesses. Even today there is still much to be learned about the diseases from which he suffered.

There has been considerable speculation concerning the effect of General Lee's health, especially during the years of 1863 and 1864, on the course, and even the outcome, of the war. It is difficult to defend the proposition that the war might possibly have been won by the South if Lee had remained in good health throughout the entire period. Although I do not pose as an authority on any phase of the War Between the States, it is my belief that Lee's illnesses had no profound effect on the final outcome. At the most, if he had been in good health throughout the entire period of the war, the conflict might have been prolonged somewhat, but the end was inevitable. The North had too many resources, both in men and money. In his farewell address to his troops, General Lee acknowledged this: ". . . the Army of Northern Virginia has been compelled to yield to overwhelming numbers and resources."

Ill At White Sulphur Springs

General Lee became President of Washington College in the summer of 1865, the same year the war closed. During the first few years of his presidency, he appeared in reasonably good health, except for suffering an illness in the summer of 1867. The General was vacationing at White Sulphur Springs when his illness began. The exact nature of his sickness is not known, but, according to Freeman,[2] his physical distress grew into a real illness. Lee thought it was induced by a cold. He made a slow recovery, and he was left feeble. Perhaps it is improper to term this as a major illness, but the fact that he actually became feeble at the age of 60 merits our attention. It may have been an acute virus infection, a severe one.

He was not well in the year 1869, when he was 62. During June of that year the decline in Lee's health became serious, and he had to consider his physical condition in making plans for the summer. According to Freeman,[2] the symptoms that started the beginning of the end began on October 22 of that year. His illness began with what appeared to be a severe cold. The story is told[1] that about this time he had taken some members of his family for a drive in a carriage and when they returned home the horse fell down and appeared to be dying. The General examined the animal at once and found that the horse's collar was far too tight. Lee became emotionally upset and somewhat later developed considerable discomfort in his chest. It is possible, of course, that this episode had nothing to do with his chest pain, although it is known that emotions are capable of producing anginal pain.

General Lee made a fair recovery from his cold and chest pains and, about 10 days later, took a pleasure ride on Traveler and also conferred with his faculty. He complained, however, of pronounced weakness and became somewhat mentally depressed. The doctors diagnosed his condition as "inflammation of the heart sac," that is, pericarditis, the same condition from which he suffered in 1863. He complained also of rheumatism in his back, left side and arm. The physicians did not tell him, but Lee believed his heart was affected and he so informed his

oldest son. On New Year's Day he was able to keep open house to his friends.

Southern Trip Wearing

In March, 1870, Washington College granted him a short leave of absence so he could travel farther south to a warmer climate which might help relieve his rheumatic condition. He was reluctant to leave, but since he was strongly urged, he left on March 24. On March 25, he went to Richmond and was thoroughly examined by three physicians.

The southern trip was most wearing and attended with considerable emotion, since he was hailed with adulation in many southern cities. His former soldiers came from long distances to pay homage to their great leader. The pains in his chest became constant, even when he was completely at rest, whereas heretofore they had occurred principally on exertion. He stated that his "complaint was fixed and old."

He returned from the deep South and was in Richmond from May 24 to May 26, and was again examined by his three physicians. They could not agree on a precise diagnosis, but believed that pericarditis could not explain all his symptoms and that probably several maladies were involved. They attributed some of his pain to angina pectoris and thought that a chronic pericarditis might be accompanying it. They recognized his arthritic condition and the presence of arteriosclerosis, which was said to progress rapidly after 1866.

Heart 'Diffused'

General Lee returned to Lexington and presided over the Commencement activities. Shortly after this he was advised by his local physicians to go to Baltimore to consult Dr. Thomas Hepburn Buckler, an eminent clinician. Doctor Buckler was more encouraged about his physical condition than some of his other physicians, and Lee wrote, "He says he finds my lungs working well, the action of my heart a little too much diffused . . . . He is inclined to think my whole difficulty arises from rheumatic excitement . . . . I appear to have a rheumatic constitution, must guard against cold, keep out in the open air, exercise . . . ." He was also advised to drink lemon juice.[2] Just what Doctor Buckler meant by the word "diffused" is not known. Did he hear a friction rub, or was there a cardiac irregularity, or a murmur, or simply a weakness of the heart sounds? His so-called rheumatic condition evidently caused him considerable distress, for in August, 1870, he went to Hot Springs and took the "broiler" and "spout" treatment. In an attempt to relieve the pains in his shoulder joints, cantharides plasters were applied; at the time blister plasters were commonly used.

Despite chronic ill health which caused him so much distress, General Lee continued working at the College until about two weeks before his death. On September 28, he attended a meeting of the vestry of Grace Church at 4 P. M. It was a rainy and chilly day and the meeting room was not heated. Lee wore a military cape to ward off the chill, and presided at the meeting, an important one since the matter of building a new church was discussed at some length. He did not arrive home until seven that evening.

Suffers Brain Damage

His wife reported that the General stood up before the table to say grace, but could not speak and sat down. His two physicians were called and found that there was no paralysis, but that he was very weak, had a tendency to doze and was slightly impaired in consciousness. They diagnosed his condition as a "venous congestion." Obviously he had suffered brain damage, either an embolism or a hemorrhage in the brain substance which apparently did not especially involve the motor nerves. His physicians applied cold applications to his head and hot dressings to his feet and also cupped him. He slept a long time and they believed that he would make a good recovery and so informed his wife, but, unfortunately, their prognosis was too optimistic.

During the next few days he was able to swallow the medicine prescribed, ate his food well, could be propped up in bed, and could also turn his body when lying down. He showed a slight amount of improvement and, on the morning of October 10, when his physician asked him how he felt, General Lee stated haltingly, but distinctly, "I feel better." On the afternoon of that day, however, his pulse began to flutter and his respiration quickened. The next day he lapsed into half-delirium and stated clearly, "Tell Hill he *must* come up." The end came on October 12 about 9:30 in the morning. The last words he spoke were, "Strike the tent." He was buried in the vault beneath the Chapel which he had built.[5] His resting place bears only this inscription—"General Robert Edward Lee."

References

1. Krantz, J. C., Jr.: Va. Med. Monthly. 86:306, 1959.
2. Harwell, R.: Lee. Charles Scribner's Sons, New York, 1961. An abridgement in one volume of the four volumes, R. E. Lee, by Douglas Southwell Freeman. Charles Scribner's Sons, N. Y., 1934.
3. Blanton, W. B.: Medicine in Virginia in the 19th Century. Garett & Massie, Inc. Richmond, Va., 1933, p. 316.
4. Mitchell, R. E., Jr.: Va. Med. Monthly, 102:67, 1975.
5. Brooks, W. E.: Lee of Virginia. Bobbs Merril Co. Indianapolis, Ind., 1932.

Join the West Virginia State Medical Association Alaskan Adventure Air-Sea Cruise

Departing Pittsburgh on July 19, 1976 from $1198

ly by private chartered jet direct to ancouver, British Columbia, to board our floating resort hotel, Princess Cruise Line's Island Princess. Then glide rough the Inside Passage up the coast of Canada and the Alaska anhandle.

Carved thousands of years ago by ce age glaciers, the Inside Passage ffers a spell-binding panorama. Cascading waterfalls. Beautiful fjords. now-dusted mountains rising from the ater's edge. Mile-wide glaciers. Blue rystal ice floating in the sea. Fascinating fishing villages and gold rush owns.

t sea or ashore, everything has been rranged for your pleasure. Participate optional shore excursions. Shop for oap stone carvings, gold jewelry or rs. Aboard ship, enjoy superb service, emorable cuisine, and nightly ntertainment.

e low cost includes round-trip air-ir and the cruise, plus transfers and aggage handling.

e good life. We'll show you what it eans as you behold America's last ontier. Join us aboard the Island incess and leave the world in your ake.

nd to:
West Virginia State Medical Association
P. O. Box 1031
Charleston, West Virginia 25324

closed is my check for $_____
100 per person) as deposit.

ames _____

dress _____

y _____

te _____ Zip _____

me Phone _____ Bus. Phone _____

A message from . . .

The President

WORK, AND MORE WORK

WE are approaching that time of year again—the vacation season, during which many of the local medical societies take a breather from their regular meeting schedules.

Unfortunately, however, this isn't a year for reduced summer activity—at either the state headquarters or local level.

The primary election in the state soon will be over, and the battle lines for the November general balloting will be drawn. At the risk of sounding repetitive, each and every physician must review carefully the primary results—then give detailed attention to the legislative races, in particular, ahead.

A number of significant matters still need to be resolved by Medical Association committees in the next few months, and certainly prior to the Annual Meeting at The Greenbrier in August.

All of these items require time, and effort. But with the awesome challenges faced by medicine, as detailed almost day by day by the public press and publications within the various professional areas, we "have to get on with it."

The message, in other words, can be summed up in a very few words: work, and more work.

Jack Leckie

JACK LECKIE, M. D., *President*

THE WEST VIRGINIA MEDICAL JOURNAL

Official Organ of the West Virginia State Medical Association

The Publication Committee is not responsible for the authenticity of opinion or statements made by authors or in communications submitted to this Journal for publication. The author or communicant shall be held entirely responsible.

Published monthly on the first day of the month, at Charleston by the West Virginia State Medical Association. Original articles are accepted on condition that they are contributed exclusively to the Journal. Advertising rates furnished on request.

Address all communications to Business Manager, West Virginia Medical Journal, Box 1031, Charleston, West Virginia 25324. Phone 346-0551.

EDITORIALS

LET'S ATTACK CONCERNS WITH EYE ON GOALS

In the news section of this month's *Journal* is a story on additional accreditation of continuing medical education programs offered by hospitals and a specialty organization. On the cover, the State's physicians are urged to cast their ballots in the May 11 primary.

At first glance, these seem to be topics far removed. But they really are not. They fall clearly within the overall objectives of the State Medical Association—and maybe this is a good time to give some new consideration to those objectives.

Article II of the Association's Constitution, in effect, "says it all" as far as purposes and goals, and the very reason for this organization's existence, are concerned.

First, the Association's purpose is to "federate and bring into one compact organization the entire medical profession of the State of West Virginia, and to unite with similar associations or societies of other states to form the American Medical Association. . . ."

The Association also has been designed to "extend medical knowledge and advance medical science; to promote the public health; to elevate the standards of medical education; to secure the enactment and enforcement of just medical laws; to promote the general welfare of physicians. . . ."

Finally, the Association has as a purpose steps to "enlighten and direct public opinion in regard to the great problems of state medicine so that the profession shall become more capable and honorable within itself, and more useful to the public in the prevention and cure of disease and in prolonging life and adding comfort thereto."

Clearly, we are doing some of the above things better than others—but it's most difficult to give a single objective a higher priority than others. The Association and its membership must not only strive, but redouble their efforts, to carry out WELL ALL of the charges given them.

In many ways, things perhaps have changed since February 28, 1867, when 16 physicians of northern West Virginia issued a circular to all members of the profession in the State to assemble in Fairmont on April 10. On that date—April 10—the West Virginia State Medical Association was officially organized, with Dr. John Frissell of Wheeling elected President and Dr. James E. Reeves of Fairmont named as the first Secretary.

One of the Association's original objectives was to obtain passage of laws regulating the practice of medicine and surgery in this State, and to create a State health department. The first Medical Practice Act of West Virginia followed in 1881, and that statute created the West Virginia Department of Health.

The challenges perhaps were simpler then, but every bit as real to the physicians involved as are the complexities, frustrations and problems facing doctors today. The early Association membership, which numbered about 40, proved that it could face up to those challenges. So can the present-day Association membership of 1,800.

A bit of reflection from time to time on those things for which the Association stands, and the objectives spelled out in its current Constitution, ought to provide more than a little help and incentive in dealing with the modern era's concerns.

Elsewhere in this issue of *The Journal* may be found an article on the health of General Robert E. Lee. It is appropriate to examine the health of one of the outstanding generals of the War Between the States. A number of reasons could be given for this; for example, the first battle of the war was fought in what is now West Virginia. It, too, may be remembered that General Lee led an expedition into the mountains of western Virginia, but withdrew his troops. He was rather severely censured for this action. Eventually, however, he became known as one of the most brilliant generals of the war.

THE HEALTH OF GENERAL ROBERT E. LEE

On the whole, General Lee enjoyed good health as a young man, but in 1863, the second full year of the war, when he was 56 years old, he suffered a severe illness which was diagnosed as angina pectoris associated with pericarditis. He recovered from this illness, but apparently suffered sporadically from angina pectoris up to the time of his death in October, 1870, at the age of 63. His death presumably was due to cardiovascular disease. It is doubtful that his illness in 1863 and 1864 affected the outcome of the war. There are those who believe, however, that if he had maintained good health the war would have lasted longer and that the outcome might even have been different.

It is of interest to call attention briefly to the health of General Ulysses S. Grant, General Lee's great opponent. General Grant was 15 years younger than General Lee. The cause of General Grant's death was malignancy of the throat, and he died in 1885, also at the age of 63. It is indeed a coincidence that both General Lee and General Grant died at a comparatively early age. They were great men. After the war, General Lee did all he could to promote peace and understanding. The United States can well be proud of both of them.

When a political candidate emerges the winner despite potent opposition from special-interest groups and the press, there is a standard way of describing his success: "He had everybody against him but the people."

PHYSICIANS CONTINUE TO LEAD IN PUBLIC CONFIDENCE POLLS

Today that could reliably be said of physicians. The polls show we're retaining our public esteem, regardless of onslaughts from various denizens of Capitol Hill, regulatory agencies, Ralph Nader, Max W. Fine, and the *New York Times*.

According to a new survey by Louis Harris, the people view physicians more favorably than all other sources of their health care.

Topping the 15 categories surveyed are medical specialists, viewed favorably by 83 per cent of the public and unfavorably by only nine per cent. Confidence in general practitioners has risen from 72 per cent favorable–19 per cent unfavorable in 1968 to 81 per cent–16 per cent.

Hospitals in general got a 70 per cent favorable–27 per cent unfavorable rating in the poll, which was conducted for the Federation of American Hospitals.

The cheering section for eventual Federal takeover of care should take note that private, nonprofit hospitals received a 60 per cent favorable–21 per cent unfavorable rating, compared with 53 per cent–20 per cent for military and veterans' hospitals.

Although labor unions are among the glibbest pleaders of the "we demand better care for the people" line, union medical centers trail badly in public regard.

The Harris survey also shows that the public considers higher malpractice insurance premiums one of the five major causes of climbing medical and hospital costs—along with increases in nurses' salaries, physicians' fees, office overhead, and drug costs.

A flock of other surveys show the doctor is pretty darn popular.

Physicians were rated the most trustworthy of occupations in a survey by Chilton Research Services. In another survey, more than eight of 10 people interviewed by Roper Reports said they are "very satisfied" or "fairly well satisfied" with both the quality and availability of their medical care. While a majority considered medical costs too high, eight of 10 expressed satisfaction with their provisions for meeting those costs.

One good turn deserves another—so thank your patients for all these votes of confidence.—*Guest Editorial by the American Medical Association.*

New Journal Feature

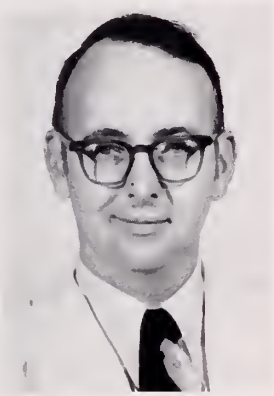
A new Department in *The Journal*, "Third-Party News, Views and Program Concerns," begins in this issue (Page xii). The "Third-Party" page replaces "The Month In Washington," which has been discontinued by the AMA. It is believed the new *Journal* feature can be of considerable value in communicating to physicians pertinent and timely information from State government agencies involved in health care, and other third-party organizations.

GENERAL NEWS

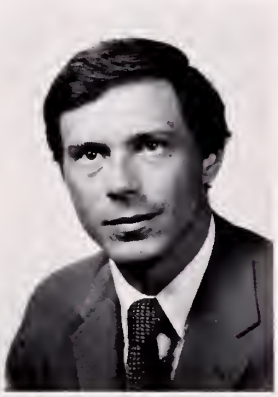
Cincinnati, WVU Physicians Added To Annual Meeting Program

Dr. Thomas H. Joyce III of Cincinnati and Dr. William A. Neal of Morgantown have accepted invitations to present papers during the 109th Annual Meeting of the West Virginia State Medical Association, it was announced by Dr. Robert D. Hess of Bridgeport, Chairman of the Program Committee. The convention will be held August 18-21 at The Greenbrier in White Sulphur Springs.

Doctors Neal and Joyce will speak at the second general scientific session on Friday morning, August 20. Doctor Neal will speak on "Regionalization of Perinatal Care in West Virginia," while Doctor Joyce's topic will be "A Broad Review of Obstetrical Anaesthesia." Dr. Herbert H. Pomerance of Charleston will be the moderator.



Thomas H. Joyce III, M. D.



William A. Neal, M. D.

Thomas H. Joyce III, M. D.

A native of Iowa, Doctor Joyce is Associate Professor of Anaesthesia and Obstetrics and Gynecology at the University of Cincinnati Medical Center. He also is Director of the Division of Obstetrical Anaesthesia at the medical center, and is staff anesthesiologist at Cincinnati General Hospital, Holmes Hospital, Children's Hospital, and the Veterans Administration Hospital in Cincinnati. He is consultant to the U. S. Naval Hospital at Portsmouth, Virginia.

Doctor Joyce took his undergraduate education at the University of Colorado and Creighton University in Omaha, Nebraska, receiving his M. D. degree in 1959 from the latter university's School of Medicine.

He served a rotating internship at the U. S. Naval Hospital in Bremerton, Washington, followed by a year of graduate training in radiobiology with the Navy, and then a residency in anesthesia at the U. S. Naval Hospital in Philadelphia.

Doctor Joyce was Assistant Professor of Anesthesiology and Director of the Respiratory Care Team at the West Virginia University Medical Center in 1969-70.

He is a Diplomate of the American Board of Anesthesiology and a Fellow of the American College of Anesthesiologists.

Doctor Joyce, the author of a number of publications on anesthesia, presented a paper on "Anesthesia in Vietnam" during the 1968 Annual Meeting of the West Virginia State Medical Association.

William A. Neal, M. D.

Doctor Neal, a 1966 graduate of the West Virginia University School of Medicine, is Assistant Professor of Pediatrics at WVU. A native of Huntington, he is a Diplomate of the American Board of Pediatrics.

Doctor Neal received his undergraduate work at Wheeling College and Xavier University. Following graduation from WVU, he served a rotating internship at the Milwaukee County General Hospital and, after service with the U. S. Navy, was a resident in the Department of Pediatrics at the University of Minnesota Medical School in 1970-71. This was followed by three years as a Medical Fellow in Pediatric Cardiology and Instructor in the Department of Pediatrics at the latter institution before being named to his present position at WVU in 1974.

While a WVU medical student in 1965, Doctor Neal received the Edward J. Van Liere Student Research Award; and he also was the recipient of the first prize for a resident research paper in 1971 from the North Central Pediatric Society.

Doctor Neal is the author or co-author of a number of scientific publications.

First General Session

It was announced previously that the first general scientific session will be held Thursday morning, August 19. Dr. N. LeRoy Lapp of Morgantown will

moderate this session, which will be devoted to a "Symposium on Pulmonary Disease."

Two of the speakers and their topics will be:

"Viral Infections of the Lung"—Richard B. Hornick, M. D., Professor and Director, Division of Infectious Diseases, University of Maryland School of Medicine; and "Recent Advances in the Diagnosis and Therapy of Chronic Reversible Airway Obstructions"—Paul M. Stevens, M. D., Professor of Medicine and Chief of the Pulmonary Section at Baylor College of Medicine in Houston.

Third General Session

It also was announced previously that Dr. Richard Moriarty of Pittsburgh and Dr. Thomas L. Stern of Kansas City, Missouri, will present papers during the third general session on Saturday morning, August 21.

Doctor Moriarty, Assistant Professor of Pediatrics at the University of Pittsburgh School of Medicine, and Director of the National Poison Center Network at the Children's Hospital of Pittsburg, will speak on "Poisonings—Some New Concepts and Some Old Ones Revisited."

"Motivation and Preparation for Becoming a Teacher" will be the topic of Doctor Stern, who is Director, Division of Education, American Academy of Family Physicians.

Dr. Richard E. Flood of Weirton will moderate the Saturday morning session, and also will coordinate a practical discussion of "Joint Practice of Nurses and Physicians as an Approach to Meeting Growing Primary Care Demands" during that session.

Additional speakers will be announced in future issues of *The Journal.*

Business Meetings

The Pre-Convention Meeting of the Council will be held on Wednesday morning, August 18, and the first session of the House of Delegates has been scheduled that afternoon. As announced previously, Dr. Richard E. Palmer of Alexandria, Virginia, will speak at the first session of the House of Delegates. Doctor Palmer will be installed as President of the American Medical Association during the annual meeting at Dallas in June.

Members of the Association are encouraged to send in reservation forms to obtain room accommodations at The Greenbrier as soon as possible.

Medical Staff Conference Planned For The Greenbrier In Fall

The Second Annual Maryland Medical Staff Conference will be held October 6-9 at The Greenbrier in White Sulphur Springs. The conference will be co-sponsored by the Maryland Hospital Education Institute and the State Medical Association.

The conference theme will be, "Hospital Leadership—Organizing for Accountability for Solving the Tough Problems."

The faculty announced to date will include: Russell Roth, M. D., former American Medical Association President; Charles Edwards, M. D., former HEW Assistant Secretary for Health and now Vice President of Becton-Dickenson Company; Nathan Stark, Vice Chancellor for Health Affairs, University of Pittsburgh; Robert L. Evans, M. D., of Rockford, Illinois; and William R. Fifer, M. D., of Minneapolis (University of Minnesota Health Sciences Center).

Hospital medical staff presidents and chiefs of staff, trustees, and chief executives are among those encouraged to participate. Areas of discussion will include: qualifiers and disqualifiers for medical staff, trustee and top management roles; organizing, planning and investing for community priorities; and managing risks under cost and regulatory pressures.

Some 145 persons were involved in the first annual conference held in March of 1975 at The Greenbrier.

For additional information and registration forms, contact: Maryland Hospital Education Institute, 1301 York Road, Lutherville, Maryland 21093 (telephone (301) 321-6200).

Dr. Flood Vice President, National Medical Boards Federation

Dr. Richard E. Flood of Weirton has been elected Vice President of the Federation of State Medical Boards of the United States. Doctor Flood, who has practiced in Weirton for 29 years and is a member of the staff of Weirton General Hospital, was chosen at the Federation's 72nd annual meeting held recently in Chicago.

Richard E. Flood, M. D.

Doctor Flood is a member of the Federation's Examination Committee. The committee's licensing examination is administered in 48 of the 50 states and in two provinces of Canada. He also is a member of the West Virginia Medical Licensing Board.

Director of the Weirton General Hospital Family Practice Education Program, he is Clinical Professor in the Department of Family Practice at the West Virginia University School of Medicine. A Past President of the State Medical Association, he currently is a Delegate of the Association to the American Medical Association. He also is Chairman of the Association's Nurses Liaison Committee.

Anesthesiologists Society Plans Annual Meeting In June

The annual meeting of the West Virginia State Society of Anesthesiologists, "Anesthesia Update, '76," will be held on Saturday, June 26, at the Lakeview Inn and Country Club in Morgantown.

Dr. Richard B. Knapp, Professor and Chairman of the Department of Anesthesiology at the West Virginia University School of Medicine, will serve as Chairman for the meeting.

Registration will begin at 8 A. M., followed by welcoming remarks at 8:45 by Dr. N. LeRoy Lapp, Assistant Dean for Continuing Medical Education at WVU.

The speakers and their topics for the morning session will be:

"Recent Concepts—Obstetric Anesthesia"—Harry Cohen, M. D., Associate Professor of Anesthesiology and Chief of Obstetric Anesthesia, University of Miami (Fla.); "Current Developments in Centroneurogenic Pulmonary Edema"—Gerald Moss, M. D., Professor of Surgery, Albany (N. Y.) Medical College;

"Current Thoughts on Halothane and the Liver"—Roy Simpson, D. Phil., Chief of Anesthesiology, Baylor University Medical Center, Dallas; and "Socio-Economic Problems of Anesthesiology in Medicine Today"—E. S. Siker, M. D., Chairman of Anesthesiology, Mercy Hospital, Pittsburgh; and Secretary, American Board of Anesthesiology.

Afternoon Session

The speakers and their topics for the afternoon session will be:

"West Virginia Anesthesia Update, '76: Triazolam, a New Oral Hypnotic"—Doctor Knapp; "The Neuromuscular Blocking Effect of Trimethaphan (Arfonad)"—Juan Gutierrez, M. D., Associate Professor of Anesthesiology, WVU;

"The Role of Serotonin and Catecholamines in the C.N.S. Effects of Ketamine"—David Smith, Ph.D., Associate Professor of Anesthesiology, WVU; and "New Intravenous Anesthetics"—Guenter Corssen, M. D., Professor and Chairman of Anesthesiology, University of Alabama.

A round-table discussion with the speakers is scheduled from 3 to 4:40 P. M.

The evening schedule will include cocktails at 5:45 and dinner at 7. The dinner speaker will be William K. C. Morgan, M. D., Professor and Chairman of Pulmonary Diseases, WVU.

The program is acceptable for five hours of credit by the American Academy of Family Physicians.

For additional information and reservation forms, contact: Richard B. Knapp, M. D., Department of Anesthesiology, WVU Medical Center, Morgantown 26506.

Coronary Conference For Primary Care Physician May 21-22

A conference on "Coronary Care for the Primary Care Physician" will be held May 21-22 at the Ramada Inn in South Charleston. The conference is sponsored by the Charleston Division, West Virginia University Medical Center; the Charleston Area Medical Center; and the West Virginia Affiliate, American Heart Association.

Harold Selinger, M. D.

The program will begin with registration at noon on Friday, May 21, followed by a welcome by Don L. Arwine, President of CAMC. An introduction will be given by Harold Selinger, M. D., Cardiologist, CAMC, and Clinical Professor of Medicine, Charleston Division, WVU. Doctor Selinger will be the conference Chairman.

The speakers and their topics on Friday afternoon will be:

"Physical Examination in the CCU"—Michael Santer, M. D., Parkersburg Cardiologist, and Clinical Assistant Professor of Medicine, WVU Medical Center, Morgantown; "Arrhythmias — Prevention and Treatment"—William H. Carter, M. D., Cardiologist, CAMC, and Clinical Associate Professor of Medicine, Charleston Division, WVU; "Pump Failure — Diagnosis and Treatment"—Doctor Selinger;

William H. Carter, M. D.

"Enzymes in Myocardial Infarction" — Stafford G. Warren, M. D., Cardiologist, CAMC, and Clinical Assistant Professor, Charleston Division, WVU; "Anticoagulants and Coronary Artery Disease" — Dilip Basu, M. D., Cardiologist, CAMC, and Clinical Assistant Professor of Medicine, Charleston Division, WVU; and "Surgery in Coronary Artery Disease—Indications and Results"—M. Zafrullah Khan, M. D., Thoracic Surgeon, CAMC.

There will be a social hour Friday evening beginning at 6:30, followed by dinner at 7:15. The fee for the dinner and social hour will be $12 for all registrants and guests.

Saturday Program

The Saturday program will begin at 8:30 A. M. The speakers and their topics will be:

Stafford G. Warren, M. D.

"The Nurse's Role in the CCU" — Betty Jo Rinehart, R. N., Coordinator, Coronary Care Training, CAMC; "Exercise Testing" — Doctor Warren; "Echo Cardiography"— Doctor Carter; "Radioisotopes"—Doctor Selinger; and "Recovery and Rehabilitation from Myocardial Infarction"— William J. Echols, M. D., Cardiologist, Huntington.

Luncheon, incorporating a round-table discussion, will begin at 12:30 P. M.

The conference is approved for eight hours of credit in Category 1 of the AMA Physician's Recognition Award. Credit from the American Academy of Family Physicians has been requested.

The registration fee will be $20, except for residents and students, who will be charged $4 for the cost of the luncheon only. Registration and fees may be mailed to: Director, Continuing Education, Charleston Division, WVU Medical Center, P. O. Box 2867, Charleston 25330. Checks should be made payable to "W.V.U. Foundation, Inc." Registration is requested by May 14.

Surgery Conference June 5 At CAMC, Charleston

The Third Annual Surgery Conference will be held on June 5 at the Charleston Area Medical Center Administration Building (Room 101), 1210 Elmwood Avenue. The sponsors are the Charleston Division, West Virginia University Medical Center; and CAMC.

Dr. Bert Bradford, Director of the Department of Surgery, Charleston Division, WVU, is conference Chairman.

Caldwell B. Esselstyn, M. D.

Ezra Steiger, M. D.

The one-half day conference will begin with registration at 7:30 A. M., followed by a welcome by Hartwell G. Thompson, M. D., Dean of the Charleston Division, WVU. Doctor Bradford will provide an introduction to the conference.

The speakers and their topics will be:

"Pancreatic Cancer, Bypass Versus Resection"— Caldwell B. Esselstyn, M. D., Department of General Surgery, Cleveland Clinic; "Hyperalimentation Made Practical"— Ezra Steiger, M. D., Department of General Surgery, Cleveland Clinic; "Colo-Rectal Carcinoma—Surgical Treatment and Results"— Victor Fazio, M. D., Department of Colon and Rectal Surgery, Cleveland Clinic;

"Renal Transplantation—End Results"—Lyn Banowsky, M. D., Department of Urology, Cleveland

Victor Fazio, M. D.

Lynn Bonowsky, M. D.

Clinic; "Coronary Artery Surgery"—Floyd Loop, M. D., Department of Cardiovascular Surgery, Cleveland Clinic; and "Prophylactic Measures in Acute Trauma"—Charles Eckert, M. D., Professor of Surgery, Albany (N. Y.) Medical College.

Doctor Eckert will serve as moderator.

The conference has been approved for four hours' credit in Category 1 of the AMA Physician's Recognition Award.

The conference also is sponsoring a Whitewater Expedition, limited to 50 registrants, on New River, from Prince to Thurmond, on Friday, June 4. The fee for the expedition is $37.

Floyd Loop, M. D.

The registration fee will be $10 for practicing physicians, with no fee charged for house staff and students. For registration forms and additional information, contact: Director, Continuing Education, Charleston Division, WVU Medical Center, P. O. Box 2867, Charleston 25330. Registration is requested by May 28. Checks should be made pable to: "W.V.U. Foundation, Inc."

Three More CME Programs Approved By State Medical Association

The continuing medical education programs of two more hospitals and a specialty society have been accredited by the State Medical Association through its Committee on Medical Education and Hospitals.

Approved, effective March 31, were the CME programs of the West Virginia Obstetrical and Gynecological Society; Broaddus Hospital—Myers Clinic, Philippi; and the combined program of the Ohio Valley Medical Center and Wheeling Hospital, in Wheeling.

The dates of the site surveys for the three programs, the members of the survey team, and the length of the accreditation period granted are as follows:

West Virginia Obstetrical and Gynecological Society—September 26, 1975 (during the Fourth Annual Clinical Workshop in Obstetrics and Gynecology, in Huntington); Drs. William J. Echols, Chairman, and Harold N. Kagan, both of Huntington; full three-year accreditation;

Broaddus Hospital—Myers Clinic—December 3, 1975; Drs. Hartwell G. Thompson, Charleston, Chairman; and L. Dale Simmons, Clarksburg; full three years;

Ohio Valley Medical Center and Wheeling Hospital—February 11 and 12, 1976; Drs. Dennis S. O'Connor, Huntington, Chairman; and R. James Yates, Beckley; two-year provisional accreditation for newly-developing program.

Category 1 Eligibility

Physicians receiving continuing education in conjunction with the above two hospitals and specialty society may claim credit in Category 1 of the AMA's Physician's Recognition Award retroactive to the date of the site survey in each case.

The CME program of the Charleston Area Medical Center was re-surveyed on March 3, with the results of that survey to be announced in the near future. The CAMC was granted a one-year provisional accreditation on March 23, 1975.

Scheduled to be surveyed in the near future is the Fairmont Clinic.

Including the three programs now being announced, a total of nine CME programs have been approved since the voluntary accreditation program of the State Medical Association began in 1973. The other six accredited hospitals and institutions are:

Beckley Appalachian Regional Hospital; Veterans Administration Center, Martinsburg; West Virginia Academy of Ophthalmology and Otolaryngology; West Virginia Chapter, American College of Surgeons; St. Mary's Hospital, Huntington; and CAMC.

Hospitals and organizations interested in seeking CME accreditation may contact the headquarters of the State Medical Association.

A benefit premiere held recently in Charleston kicked off a national financial campaign for Camp Bronco Junction, the camp for children with bronchial asthma located in Putnam County about 35 miles from Charleston. Elliott Gould, film and stage actor, has been named Honorary National Chairman of Camp Bronco Junction. Shown above with Gould, right, are some of the guests who attended the gala benefit, which consisted of a champagne buffet, premiere showing of Gould's newest film, "I Will, I Will . . . For Now," followed by a reception. From left, are Lewis N. McManus of Beckley, Speaker of the West Virginia House of Delegates; Governor Arch A. Moore, Jr., and Dr. Jack Leckie of Huntington, President of the West Virginia State Medical Association. The annual Bronco Junction campaign was made national for the first time this year, with camp officials noting that there are more than 900,000 children across the country who potentially could benefit from the treatment program. Professional services by the medical staff are provided on a volunteer basis.

Becoming increasingly well known among West Virginia physicians is Dr. Robert W. Coon, Vice Chancellor for Health Education for the West Virginia Board of Regents, who has been serving as Acting Dean of the developing Marshall University Medical School. Doctor Coon was appointed to his Vice Chancellor position late in 1975. A Montana native who received his M. D. from the University of Rochester (N. Y.), he is a Diplomate of the American Board of Pathology and served as the Board's President in 1972. He was Director of the Northern New England Regional Medical Program in 1967-68, and has served as an attending pathologist and professor at several hospitals and universities, including New York's Presbyterian Hospital, and Columbia, Vermont and Maine Universities.

Continuing Education Activities

Here are the continuing medical education activities listed primarily by the West Virginia University School of Medicine for part of 1976, as compiled by Dr. N. LeRoy Lapp, Assistant Dean for Continuing Education. The schedule is presented as a convenience for physicians in planning their continuing education program. (Other national, state and district medical meetings are listed in the *Medical Meetings* Dept. of *The Journal.*)

The program is tentative and subject to change. It also should be noted that weekly conferences are held on both the Morgantown and Charleston campuses. Further information about these may be obtained from: Division of Continuing Education, WVU Medical Center, P. O. Box 2867, Charleston 25330; or, Office of Continuing Medical Education, WVU Medical Center, Morgantown 26506.

May 21, 22	Coronary Care for the Primary Care Physician	South Charleston
June 4	Second Annual ENT Teaching Day	Morgantown
June 5	Third Annual Surgery Conference	Charleston
June 7	Controversies in Surgery	Charleston
June 26	Anesthesia Update 1976	Morgantown
June 13-18	School of Alcohol and Drug Abuse Studies	Morgantown

Medical Meetings

The following is a partial list of national, state and district medical meetings scheduled in the coming months.

1976

May 1-2—W. Va. Assn. of Pathologists, Morgantown.

May 2-6—Am. Soc. of Colon & Rectal Surgeons, New Orleans.

May 8—W. Va. Thoracic Soc./W. Va. Lung Assn., Huntington.

May 9-12—Ohio State Med. Assn., Columbus.

May 9-12—Am. Assn. of Plastic Surgeons, Atlanta.

May 10-13—Am. College of Obstetricians & Gynecologists, Dallas.

May 10-14—Am. Psychiatric Assn., Miami Beach.

May 14-17—Am. Ophthalmological Soc., Kamuela, Hawaii.

May 16-19—Am. Thoracic Soc., New Orleans.

May 22-27—Am. Gastroenterological Assn., Miami Beach, Fla.

May 25-29—Am. Gynecological Soc., Hot Springs, Va.

May 27-29—Am. Cancer Society, National Conf. on Radiation Oncology, San Francisco.

June 9-12—Aspen Lung Conference, Aspen, Colo.

June 14-16—Am. Neurological Assn., San Francisco.

June 17-20—Pa. Allergy Assn., Hershey.

June 26—W. Va. State Society of Anesthesiologists, Morgantown.

June 26-July 1—AMA Annual Meeting, Dallas.

June 27-28—Am. College of Preventive Med., Dallas.

Aug. 18-21—109th Annual Meeting, W. Va. State Medical Assn., White Sulphur Springs.

Sept. 9-11—Am. Assn. of Obstetricians & Gynecologists, Hot Springs, Va.

Sept. 20-23—AAFP, Boston.

Sept. 26-30—Kentucky Med. Assn., Louisville.

Oct. 6-9—Maryland Medical Staff Conference, White Sulphur Springs.

Oct. 11-15—ACS, Chicago.

1977

Jan. 28-30—Tenth Mid-Winter Clinical Conference, Charleston.

The West Virginia Medical Journal

Vol. 72, No. 6 June, 1976

PART I: ANTIMICROBIAL THERAPY SERIES

Use And Abuse Of Antimicrobial Agents*

(A Critique)

Jack L. Le Frock, M. D.; Arthur I. Jacknowitz, Pharm. D.; Randall A. Prince, Pharm. D.; And Perry M. Kalis, M. D.

EDITOR'S NOTE: In this issue of *The West Virginia Medical Journal,* we are departing from the usual format by devoting the entire Scientific Section to a special series of four articles on antimicrobial therapy by the group of authors shown on this page.

There is little doubt that antimicrobial agents are sometimes misused and even abused. They are used in many situations where their use is not warranted and, even when they are indicated, failure to utilize them properly may lead to a poor clinical result. Table 1 lists the most common ways in which these agents are misused. In part, this is due to the relative lack of toxicity of some of them; and, in part, it stems from the onus which the physician now bears of having to treat all treatable disease lest he lay himself open not only to criticism but also to legal action. Not a small part of the misuse of antibiotics can be laid at the door of the patient or his relatives who, denied the administration of one of these by the judgment of the physician, hold over his head the threat of dismissal in favor of a doctor who may yield to the demand for what frequently turns out to be unnecessary treatment.

*This paper was written while Doctors Kalis and Le Frock were in the Division of Infectious Diseases, Department of Medicine, West Virginia University School of Medicine; and while Doctor Prince was in the School of Pharmacy, WVU.

The Authors

- **Jack L. Le Frock, M. D., Associate Professor of Medicine, Albany Medical College of Union University, Albany, New York; Arthur I. Jacknowitz, Pharm. D., School of Pharmacy, West Virginia University, Morgantown; Randall A. Prince, Pharm. D., College of Pharmacy, University of Iowa, Iowa City; and Perry M. Kalis, M. D., Zanesville, Ohio.**

The availability of a large number of effective drugs now makes it possible to treat successfully and even prevent many of the infections that, in the preantibiotic era, led to severe, complicated, or prolonged illness which often ended in death. Experience, however, shows that the therapy of infectious diseases has become increasingly complex and difficult; and that treatment failures and disorders induced by the drugs themselves are not uncommon. There has gradually developed an inverse relation between diagnostic and therapeutic precision on the one hand and the availability of antibiotic agents, especially those with so-called broad-spectrum effects, on the other. As the number of drugs has increased, exact diagnosis and treatment—which also should have increased—in many instances, however,

has actually decreased, Attitudes not uncommon today are (1) that all disease even remotely suspected to be of an infectious nature must be exposed to the "benefits" of chemotherapy, (2) that if one antibiotic doesn't produce the desired response, then another, and another should be administered serially, and (3) unsolved dilemmas are best resolved by the simultaneous use of two to four drugs.

TABLE 1

Misuses of Chemotherapy

1. Choice of ineffective antibiotic.
2. Inadequate or excessive doses.
3. Improper route of administration.
4. Continuation of therapy with drug to which bacterial resistance develops.
5. Failure to stop treatment in presence of serious toxic or allergic reaction.
6. Failure to alter therapy when superinfection occurs.
7. Prophylaxic of unpreventable secondary bacterial infection (see above).
8. Therapy of insusceptible infections.
9. Use of combinations of drugs when not specifically indicated.
10. Reliance on chemotherapy or prophylaxis to the exclusion of necessary surgical intervention, e.g., drainage of localized areas of infection.

If it were always possible to select the most appropriate and effective antimicrobial therapy on the basis of early microbiologic identification of the causes of all infections, there would be few problems, other than drug reactions. This is impossible in many cases, however, because of the rapid course of some infectious processes; for example, acute bacterial meningitis requires immediate treatment before the precise nature of the responsible organism can be established. The clinician is often confronted by etiologically undefined illness in which he must decide if he is dealing with an infectious process. If he makes a diagnosis of an infection, then he must decide which microorganisms are most likely causative and, finally, he must select the appropriate antibiotic until he receives results of culture and sensitivity tests.

Approaches to Diagnosis

There are four clinical approaches that are often of great help in allowing a presumptive diagnosis of the etiology of an infection to be made prior to the availability of microbiologic information. These are (1) determination of the epidemiologic background of a disease, (2) knowledge of the bacteriologic statistics of a particular type of infection, (3) careful analysis of the mode of onset and the course of such a process, and (4) gram stains of all available material.

Commense Sense in the Use of Antimicrobial Therapy

The choice of effective antimicrobial drugs for etiologically undefined infections rests firmly on the results of clinical evaluation and the use of common sense. The use of these agents in such disease, as well as in that in which the specific cause has been determined, demands the same consideration. The fact that a particular organism is known or proved to be susceptible to a particular antibiotic is not the only basis for the use of the antibiotic. If therapy is to be most effective and safe, experience indicates the necessity for a careful analysis of a number of other factors which may be of greater significance in the selection and use of an antiinfective compound. An example of such a factor is the isolation from an abscess of *Staphylococcus aureus* sensitive to cephalothin. In this case, the physician has to ask the question, "Is antibiotic treatment the appropriate means of eliminating this infection?" In the cases of abscesses, decubitus ulcers, empyema, etc., the mainstay of therapy is surgical-debridement and drainage rather than the primary use of antimicrobial agents. In such instances, antibiotics should play an adjunctive role. Unfortunately, the reverse is more often seen.

After identifying the organism and its sensitivity pattern and before prescribing an antimicrobial agent, the physician must consider several additional factors which are listed in Table 2. Even when the cause of an infectious process has been determined, selection of an appropriate drug does not follow automatically because there may be wide variations in susceptibility among organisms of the same or related species. For example, in treating a series of *Proteus* infections, it will be found that some strains respond only to streptomycin, whereas others will respond to sulfonamides, chloramphenicol, penicillin, etc. The cost of the different drugs has to be considered as well, since there may be very wide differences. The nature of the illness may also affect the choice of agent; for example, an orally administered drug may be unsatisfactory in a patient who is vomiting. If a patient has previously shown hypersensitivity or any other serious reaction to a drug, or if such untoward effects develop during therapy, a different agent should be used if possible. If a number of equally active compounds are available, the one with the lowest potential for producing untoward effects should be selected. The presence of

TABLE 2

Factors to Consider Before Prescribing Antimicrobial Agents

1. Previous history of hypersensitivity reactions.
2. Potential side effects.
3. Daily dosage.
4. Route of administration.
5. Duration of therapy.
6. Cost of drug.
7. Nature of illness.
   a. severity
   b. effect on absorption, excretion, metabolism
8. Host status.
   a. renal function
   b. liver function
   c. pregnancy
   d. immunologic disorders

disease states other than the infectious process itself is often critical in the selection and use of antibiotics. Thus the patient with hepatic insufficiency must not be exposed to compounds such as erythromycin and chloramphenicol which are metabolized by liver enzymes. Analogously, great caution must be exercised in the administration of antimicrobials in the presence of renal insufficiency.

Causes of Unsuccessful Antimicrobial Therapy

When improvement is seen after appropriate therapy has been instituted, answers to the following questions should be reelicited: (1) Is an infection present?; (2) What bacteria are present?; (3) Are these bacteria causing an infection?; and (4) Is antibiotic treatment the appropriate means of eliminating this infection? In the authors' experience, common failings include the initial stages of diagnosing an infection and establishing a causal relationship between bacteria that have been isolated and the observed disease state.

Therapeutic failure very rarely lies with the antibiotic chosen, especially if the choice was based on sensitively testing. Table 3 lists some causes of unsuccessful antimicrobial therapy. A very important aspect of antimicrobial therapy is the significance of host factors as determinants of the response to these agents. Clinicians concentrate on the organism responsible for infection and on the drug to produce favorable therapeutic effect, but they have overlooked the patient who is being treated. Very little attention is paid to the well-established fact that the host is probably the most important determinant of the outcome of therapy.

TABLE 3

Causes of Unsuccessful Antimicrobial Therapy

1. Incorrect diagnosis.
2. Delay in therapy.
3. Insufficient dose.
4. Altered host defenses.
5. Drug-resistant microorganisms.
6. Alteration of bacterial flora.
7. Untoward drug reactions.
8. Replacing surgery.
9. Serious underlying disease.

Conclusion

The fact that harmful effects may follow the administration of antibiotics is the primary reason that they should be used only in those situations in which they are known to be effective, and never when the indications for their application are either lacking or are, at best, only slightly suggestive. To do otherwise is to expose the patient to double-jeopardy-risk from his disease and danger from the treatment. The authors fully appreciate the difficulties associated with the establishment of specific etiologic diagnoses in patients who cannot be hospitalized and must be cared for at home without the benefit of the laboratory studies available in a hospital. Nevertheless, careful clinical evaluation and simple laboratory tests such as blood counts, examination of urine, and stained smears of discharges or exudates when indicated, will resolve many etiologic dilemmas. The decision to use a chemotherapeutic agent in any given instance must rest, in the final analysis, on the clinical judgment of the physician. It must never be surrendered to the patient or his relatives, because in that event, the physician yields not only his right but also his duty to do what is best for the patient.

PART II: ANTIMICROBIAL THERAPY SERIES

Antimicrobial Usage In Patients With Renal Impairment

Randall A. Prince, Pharm. D.; Jack L. Le Frock, M. D.; And Arthur I. Jacknowitz, Pharm. D.

Introduction

THE large numbers of antimicrobial agents currently available have given the clinician the needed armamentarium to treat bacterial infections successfully. These agents, however, like all drugs, can cause harmful side effects. Increased blood levels of antimicrobial agents can lead to toxicity, especially if the agent in question has a narrow therapeutic index. Renal disease or impairment causes increased blood levels when these agents are administered, since many antimicrobial agents are excreted primarily via the kdineys. This excretion in the urine is by glomerular filtration, renal tubular secretion or a combination of the two. In the case of certain antimicrobial agents, filtered drug may undergo tubular reabsorption. It is obvious that therapeutic tragedies can and do occur when appropriate dosing information is lacking or not used in patients with renal impairment.

Dosing Information Provided

The purpose of this paper is to provide dosing information on the use of antimicrobial agents in renal impairment. Dosing guidelines for many of the drugs to be mentioned are based upon well-documented, pharmacokinetic data. Unfortunately, the pharmacokinetics of certain antimicrobial agents in renal impairment are still not well established; therefore, their dosing guidelines are based upon pharmacokinetic information that is available and the authors' clinical experience.

Degrees Of Renal Impairment

No discussion of dosing guidelines for drugs in renal impairment would be complete without first defining the degrees of renal impairment. The classification of renal functional impairment should be based upon the glomerular filtration rate with creatinine clearance (C_{cr}) being the acceptable means of estimating the glomerular filtration rate (GFR). Unfortunately, creatinine clearance determinations are difficult to obtain at times. Usage of the serum creatinine (S_{cr}) level to calculate the creatinine clearance value provides us with a practical and useful means of estimating the degree of renal impairment.

Jelliffe has provided the clinician with a simple bedside method for calculation of creatinine clearance from the serum creatinine value, which allows for sex differences in creatinine production.

The formulae are as follows:

(Men) C_{cr}—100/S_{cr}—12

(Women) C_{cr}—80/S_{cr}—7

C_{cr}—creatinine clearance (ml./min./150 lbs.)

S_{cr}—serum creatinine (mg./100ml.)

More recently, Jelliffe has presented the following formula for use in male adults 20 to 80-years-old with a stable serum creatinine. Ninety per cent of the male creatinine clearance value will give the creatinine clearance value for females.

$$C_{cr} — \frac{98—0.8\ (\text{Age-}20)}{S_{cr}}$$

C_{cr}—ml./min./1.73 m^2 body surface area

Age—patient age in years to nearest ten years

S_{cr}—mg./100 ml.

The authors have found the above formula for the calculation of creatinine clearance to be usually within ± 5-10 ml./min. of the laboratory determined value, based upon a 24-hour urine collection.

Throughout this paper, we will refer to the various degrees of renal impairment as mild, moderate, or severe. Mild impairment refers to creatinine clearances (C_{cr}) of 50 to 80 ml./min; moderate refers to C_{cr} of 10 to 50 ml.min.; and severe refers to C_{cr} of less than 10 ml.min. Where possible, dosing adjustments based on a specific creatinine clearance will be given. Once the

clinician has determined the degree of renal impairment, he may then proceed to administer the antimicrobial agent appropriately to the patient.

It should be emphasized that the recommendations are guidelines based upon the current literature and our clinical experiences. The best method at this time for dosing antimicrobial agents in patients with renal dysfunction would be to obtain blood levels of the agents in question and dose according to the pharmacokinetic profile. Unfortunately, many hospitals do not have the personnel or equipment available to run routine multiple blood level determinations and have the data interpreted. In light of this, one must use general guidelines in dealing with many of the antimicrobial agents. Specific pharmacokinetic profiles have been elucidated for some of the antimicrobial agents and this information is presented where possible.

Discussion

The agents to be discussed are the penicillins, cephalosporins, aminoglycosides and selected miscellaneous agents.

I. Penicillins

Penicillin G: Penicillins are generally free from toxicity even in the face of rising blood levels as a result of renal impairment. Penicillin G is primarily excreted by glomerular filtration and tubular secretion, both of which can be affected during renal disease. In normal individuals the serum half-life is 30 minutes but in the anuric patient it is approximately 10 hours. Fortunately, even though the serum half-life is significantly prolonged with renal impairment, the increased blood levels are of little concern due to the wide margin of safety associated with penicillins. High dose therapy (> 20 million units/day), however, carries the potential of toxicity in patients with renal dysfunction as well as those with normal renal function. Aside from the problems of hypernatremia or hyperkalemia, depending upon which half of penicillin G is used (1.7 meq K^+/million units or 2.0 meq Na^+/million units), neurotoxicity may develop due to increased penicillin levels in the cerebrospinal fluid. This neurotoxicity is thought to be due to the method of administration of intravenous penicillin G. It has been shown that continuous infusion leads to increasing CSF levels of penicillin whereas intermittent infusion does not. It would appear that intermittent infusion is the method of choice for intravenous administration of penicillin G in high doses to any individual, and in particular to the patient with renal impairment.

Because of the "toxicity-free" characteristics of penicillin G, it is only necessary to adjust the dosing interval when severe renal impairment is present. Increasing the dosage interval to an every 8 to 12-hour schedule should be adequate.

Hemodialysis is effective in removing penicillin G from the serum with a reduction in the half-life of approximately 45 per cent occurring.

Ampicillin: Like penicillin G, ampicillin has a wide margin of safety associated with its use and it too is primarily excreted via the kidneys. It is, therefore, necessary only to change the dosage schedule when the creatinine clearance is less than ten ml./min. When the C_{cr} is < ten ml./min., a dose of 500 mg. to one Gm. per day is sufficient either orally or parenterally. Some investigators have noted a marked increase in skin rashes when standard doses are used in severe renal impairment; however, at a dose of 500 mg. per day these rashes generally do not occur.

Peritoneal dialysis does not significantly reduce serum levels; however, hemodialysis is quite effective (half-life (T½) 20 hrs. reduced to five hrs.).

Carbenicillin: Intravenous carbenicillin disodium is excreted approximately 80 per cent unchanged in the urine. In normal individuals it has T½ of one hour and in the anuric individual a T½ of approximately 15 hours. Dosage reduction should be carried out if the creatinine clearance is less than 30 ml./min.

Hoffman, *et al*, has suggested that patients with renal impairment whose C_{cr} is 10-30 ml./min. receive two to four Gm. every 6-12 hours, and those whose C_{cr} is < ten ml./min. receive two Gm. every 12 hours for extraurinary tract infections caused by *Pseudomonas aeruginosa*. Reasons for avoiding normal dosing schedules in patients with renal impairment are neurotoxicity and hemorrhage due to a disturbance of platelet function. It has been reported that excessive bleeding associated with carbenicillin's administration is more likely to occur in patients with renal impairment.

Since carbenicillin indanyl sodium or "oral" carbenicillin is used only in urinary tract infections due to susceptible organisms, an adequate concentration of the drug is not achieved in the urine with severe renal impairment.

Carbenicillin is poorly removed by peritoneal dialysis; however, hemodialysis is very effective (70 per cent reduction in T½).

Penicillinase-Resistant Penicillins: With the exception of methicillin, all of the penicillinase-resistant penicillins (cloxacillin, dicloxacillin,

oxacillin and nafcillin) may be administered at normal dosage schedules throughout the varying degrees of renal impairment (mild to severe). Methicillin's dosage interval should be changed to an every 8 to 12-hour schedule in severe renal impairment. In mild and moderate renal failure an every four-hour schedule is appropriate. Also, unlike the other agents in this category, methicillin is definitely nephrotoxic. A non-dose-related interstitial nephritis has been reported, which may play an important role in using methicillin in a patient with pre-existing renal dysfunction in certain clinical situations. Hemodialysis is not effective in removing any of these agents including methicillin, which is only 39 per cent bound to plasma proteins. A high degree of protein binding prevents cloxacillin, dicloxacillin, oxacillin and nafcillin from being hemodialyzed. The reason for methicillin's non-dialyzability is not known.

II. Cephalosporins

The cephalosporins, generally speaking, enjoy the same "luxury" as do the penicillins in that they are among the least toxic of the antimicrobials. Aside from hypersensitivity reactions, the cephalosporins are relatively free of toxic effects with certain notable exceptions, which are discussed below.

Cephalothin: Cephalothin (Keflin®) is excreted primarily by the kidneys, but also undergoes inactivation by liver enzymes to a less active metabolite. In normal, healthy individuals, the half-life is 30 minutes. In the azotemic individual (C_{cr} < five ml./min.), investigators have demonstrated a biphasic pattern to cephalothin's elimination. This biphasic elimination pattern in severely azotemic patients produced a half-life of approximately three to five hours for the first eight-hour period of administration and a half-life of 12 to 16 hours for the 8 to 24 hour period after a single dose. Dosing schedule adjustments need only be changed in the individual with severe renal impairment by increasing the interval between doses to every 8 to 12 hours.

There are a few cases in the literature that have implicated cephalothin as a nephrotoxic agent. After a careful review of the literature along with our own experiences, it is our feeling that, although cephalothin is not a definite nephrotoxic agent, it may have a potential for nephrotoxicity. Its use in patients with or without pre-existing renal disease should be one of caution, not contraindication.

Peritoneal dialysis is somewhat effective in removing cephalothin, but hemodialysis is extremely effective and should be considered the method of choice. Hemodialysis has been shown to reduce the half-life (T½) to approximately three hours in the anuric patient. A maintenance dose after hemodialysis may be required if high blood levels are needed.

Cephaloridine: Unlike cephalothin, cephaloridine (Loridine®) is definitely a nephrotoxic agent; nephrotoxicity has been of a high order when daily dosing exceeds four Grams. In the anuric individual, cephaloridine has a T½ of 20 hours; whereas in a normal healthy individual, a T½ of 1.5 hours is demonstrated. Dosage intervals should be 8 to 12 hours in mild renal impairment, 12 to 24 hours in moderate impairment, and 24 to 48 hours in severe impairment. It must be emphasized that because of the nephrotoxicity associated with cephaloridine, an alternative agent should be used in patients with or without pre-existing renal impairment. If a cephalosporin is required, cephalothin (Keflin®) or cefazolin (Kefzol®, Ancef®) are suitable alternative agents.

Hemodialysis is effective in removing cephalordine, producing a T½ of three to four hours. In order to maintain a patient on cephaloridine who is undergoing hemodialysis it is recommended that 500 mg. IM be given prior to dialysis.

Cefazolin: Approximately 90 per cent of cefazolin is excreted in the urine. Normal healthy individuals exhibit a serum half-life of 1.9 hours; whereas in the oliguric individual, it is increased to 56 hours. Again, only slight dosage schedule modification is required. Recommended are dosing intervals of 8 to 12 hours in mild impairment, 12 to 16 hours in moderate impairment, and 24 to 48 hours in severe impairment.

Nephrotoxicity with this agent does not appear to occur clinically; however, animal studies have demonstrated kidney damage. It is possible that with widespread use reports of this complication will be noted, but, to date, cefazolin is considered to be free of nephrotoxicity.

Peritoneal dialysis has little effect on the serum half-life; whereas, hemodialysis does significantly lower the half-life; however, there are conflicting reports of whether a pre-dialysis dose of cefazolin is needed to maintain adequate blood levels. We would prefer to use a pre-dialysis dose of 500 mg. IV in order to be assured of adequate blood levels.

III. Aminoglycosides

Although the aminoglycosides are welcomed additions to the antimicrobial armamentarium, they do not enjoy the "luxury" of being relatively free of toxicity as do the penicillins or cephalosporins. Since their major route of excretion

is via the kidney, the blood levels increase in renal impairment. To aggravate the situation further, the aminoglycosides have small margins of safety vis a vis therapeutic as compared to toxic blood levels. In the case of toxic blood levels, either nephrotoxicity and/or ototoxicity may become manifest. Fortunately, proper dosing schedules can be adapted in varying degrees of renal impairment to minimize the risks of toxicity. For certain of the aminoglycosides, specific formulae or nomograms can be used and, where possible, are included or referred to in the discussion of the individual antimicrobial.

Streptomycin: The serum half-life in patients with normal renal function is approximately 2.5 hours and, in severe impairment, the half-life may be as great as 100 hours. Obviously, to prevent toxicity, major dosage adjustments are required with streptomycin in renal impairment. Ototoxicity affecting vestibular function is more common than nephrotoxicity. In order to avoid toxicity, dosage intervals should be as follows: mild impairment—every 24 hours, moderate impairment—every 48 to 72 hours; and severe impairment—every 72 to 96 hours.

Kanamycin: Kanamycin is excreted primarily via the kidneys and will accumulate in all forms of renal impairment. A normal serum half-life of three to five hours may be prolonged to 80 hours in a severely impaired patient. The major toxicity manifested in patients is that of ototoxicity which, unlike streptomycin and gentamicin, primarily affects the auditory portion of the eighth cranial nerve. In order to prevent ototoxicity and/or nephrotoxicity, serum levels should be maintained below 30 mcg./ml.

Clinically, the most widely used formula for calculation of kanamycin dosage schedules is that of Cutler and Orme. They recommend a dose of seven mg./kg. every third half-life, calculating the half-life (T½) as follows: three X serum creatinine (S_{cr}). Essentially, the serum creatinine is multiplied by a factor of nine to calculate the dosing interval. For example, a 70 kg. patient with serum creatinine of three mg. per cent would receive 500 mg. (seven mg./kg. approximately) every 27 hours (three X T½ or nine X S_{cr}) according to Cutler and Orme. Unfortunately, these calculations provide for prolonged periods of subtherapeutic blood levels, especially where the T½ is extended to many hours. It is our preference to dose an individual in renal impairment with 3.5 mg./kg. every half-life (three X S_{cr}) after a loading dose of seven mg./kg. For example, in the above patient, the schedule would be 500 mg. initially, followed by 250 mg. every nine hours. Other clinicians prefer to use the nomogram developed by Mawer, *et al* rather than Cutler and Orme's formula.

Both hemodialysis and peritoneal dialysis are effective in removing this agent. Hemodialysis can remove approximately 50 per cent of serum levels; therefore, a dose of 3.5 mg./kg. after every dialysis should provide continued therapeutic blood levels.

Gentamicin: Approximately 90 per cent of gentamicin is eliminated via the kidney. The anuric individual may have a T½ of 65 hours, whereas a normal individual has a T½ of two hours. Therapeutic serum levels are between four to ten mcg./ml. with toxicity occurring above ten mcg./ml. Both ototoxicity (vestibular) and nephrotoxicity have been reported with the use of this antimicrobial agent.

Because of its narrow therapeutic index and almost total elimination by the kidney, dosage modification is imperative in all degrees of renal impairment. Probably the most widely used formula for dosing is McHenry's "Rule of 8's". With this method a dose of 1 to 1.3 mg./kg. is given at eight times the serum creatinine. For example, a 70 kg. patient with a serum creatinine of three mg. per cent would receive 70 mg. (one mg./kg.) every 24 hours (8 X S_{cr}). This method allows for long periods of subinhibitory levels of the drug when the half-life extends for many hours. It is preferable to give a loading dose 1 to 1.3 mg./kg., then half the loading dose every half-life (4 X S_{cr}). For the above patient, 70 mg. was given initially, followed by 40 mg. (approximately one mg./kg.) every 12 hours. This schedule would provide a more appropriate blood level versus time profile. Chan's nomogram for dosing individuals with gentamicin has been used successfully and is perhaps the best method for gentamicin dosing when actual blood level data is not available.

Peritoneal dialysis removes approximately 20 per cent of a gentamicin dose; therefore, no additional post-dialysis dose is usually required. Hemodialysis is effective in removing 50 per cent of a gentamicin dose. Chan has recommended an initial dose of one mg./kg., then maintenance doses during hemodialysis based on his nomogram. Others suggest a dose of one mg./kg. post-dialysis only.

IV. Miscellaneous

Doxycycline: Doxycycline's half-life does not alter with varying degrees of renal impairment. Also, no significant effect on the blood urea nitrogen (BUN) has been demonstrated; there-

fore, normal dosage schedules may be used in a patient with any degree of renal impairment. Unfortunately, low urinary concentrations with renal impairment prevent its use for urinary tract infections. Doxycycline would have to be considered the tetracycline of choice for extra-renal infection in a patient with renal impairment.

Chloramphenicol: Approximately 5 to 15 per cent of a dose is excreted in the urine in the active form. Its half-life in a normal individual is 1.5 to 3.5 hours, with the half-life being 3.2 to 4.3 hours in an anuric individual. Thus, the kidney is of minor importance in the elimination of an active drug; therefore, chloramphenicol's dosage schedule should remain unchanged regardless of the degree of renal impairment. Neither hemodialysis nor peritoneal dialysis is effective in removing the drug from the blood.

Clindamycin: Only nine per cent of active drug is excreted in the urine. The serum half-life is only slightly increased in renally impaired individuals to four to five hours as compared to 2.4 hours in normal individuals. Therefore, no dosage adjustments are required in any degree of renal impairment. Both peritoneal and hemodialysis do not significantly affect blood levels of clindamycin.

Antituberculars: It appears that both isoniazid and rifampin may be dosed normally throughout all degrees of renal impairment. Some clinicians would take exception to this statement with respect to isoniazid. We, however, are in agreement with Bowersox, *et al* that no dosage modification is required, with the possible exception of a patient with severe impairment who is a slow acetylator. In the case of rifampin, only approximately 15 per cent of a dose is excreted unchanged in the urine and the half-life remains unchanged even in severe renal impairment.

Conclusion

Although this paper has suggested guidelines for the administration of certain antimicrobials, specific dosing regimens are available in the literature for some of these drugs and should be referred to for more specific information. Optimally, the clinician should have drug blood level data available, so as to best dose a particular patient with renal impairment. Unfortunately, this data is not being generated for the appropriate dosing of antimicrobials in patients with renal impairment in many institutions. Also, it should be reemphasized that nephrotoxic antimicrobials need not be eliminated from a therapeutic regimen in a patient with a renal impairment where they are clearly the drugs of choice. Dosage schedule modification is all that is required in many situations to avoid or minimize toxicity.

Table 1 summarizes our general recommendations on dosing individuals in renal impairments. This table is to be consulted in conjunction with the text. Where more specific guidelines are provided, the reader is encouraged to use them.

TABLE 1

Antimicrobial Dosing in Renal Impairment*

Drug	*Normal Dose Interval (Hr.)*	*Dose Interval in Renal Impairment (Hours)*		
		Mild	*Moderate*	*Severe*
Ampicillin	6	6	6–12	12
Carbenicillin disodium	4	6	6–12	12
Cefazolin	8	8–12	12–16	24–48
Cephaloridine	6–12	8–12	12–24	24–48
Cephalothin	4	4	4–8	8–12
Chloramphenicol	6	6	6	6
Clindamycin	6	6	6	6
Cloxacillin	6	6	6	6
Dicloxacillin	6	6	6	6
Doxycycline	24	24	24	24
Gentamicin	8	8–12	12–36	48–96
Isoniazid	8	8	8	8
Kanamycin	12	18–24	24–72	72–96
Methicillin	4	4	4–8	8–12
Nafcillin	6	6	6	6
Oxacillin	6	6	6	6
Penicillin G	8	8	8	12
Rifampin	24	24	24	24
Streptomycin	12	24	48–72	72–96

*Dosing intervals shown in this table provide for a complete therapeutic regimen when used in combination with usual maintenance doses.

Selected Readings and References

1. Jelliffe, R.: Creatinine Clearance: Bedside Estimate. Ann. Intern. Med. 79:604, 1973.
2. Kunin, C.M.: A Guide to Use of Antibiotics in Patients with Renal Disease. Ann. Intern. Med. 67:151, July, 1967.
3. Jackson, E. A., and McLeod, D. C.: Pharmacokinetics and Dosing of Antimicrobial Agents in Renal Impairment, Part I and II. Amer. J. Hosp. Pharm. 31:36, Jan., 1974; 31:137, Feb., 1974.
4. Guisti, D. L.: A Review of the Clinical Use of Antimicrobial Agents in Patients with Renal and Hepatic Insufficiency. I. Penicillins II. Cephalosporins III. Aminoglycosides. Drug. Intel. Clin. Pharm. 7:62, Feb., 1973; 7:252, June, 1973; 7:540, Dec., 1973.
5. Bennett, W. M.; Singer, I., and Coggins, C. J.: A Practical Guide to Drug Usage in Adult Patients with Impaired Renal Function. J. Amer. Med. Assoc. 214:1468, Nov., 1970; 223:991, Feb., 1973.
6. Bennett, W. M.; Singer, I., and Coggins, C. J.: A Guide to Drug Therapy in Renal Failure. J. Amer. Med. Assoc. 230:1544, Dec., 1974.
7. Mawer, G. E., et al: Nomogram for Kanamycin Dosage. Lancet. 2:45, 1972.
8. Cutler, R. L., and Orme, B. M.: Correlation of Serum Creatinine Concentration and Kanamycin Half-Life. J. Amer. Med. Assoc. 209:539, 1969.
9. McHenry, M. C., et al: Gentamicin Dosages for Renal Insufficiency. Ann. Intern. Med. 74:192, 1971.
10. Chan, R. A., et al: Gentamicin Therapy in Renal Failure: A Nomogram for Dosage. Ann. Intern. Med. 76:773, 1972.
11. Bowersox, D. W., et al: Isoniazid Dosage in Patients with Renal Failure. New Engl. J. Med. 289:84, 1973.

PART III: ANTIMICROBIAL THERAPY SERIES

Treatment Of Common Infectious Disorders

Perry M. Kalis, M. D.; Jack L. Le Frock, M. D.; Randall A. Prince, Pharm. D.; And Arthur I. Jacknowitz, Pharm. D.

Summary

THE following article has been written with the purpose of providing a practical guide for the treatment of bacterial infections. In this regard, the following format has been used: a brief description of pertinent aspects of the individual disease entity has been presented, followed by the currently recommended antimicrobial agents for each entity. Antibiotics and dosages recommended are a reflection of the authors' opinions and unless otherwise specified are for adults with normal renal function.

Respiratory Infections

Pharyngitis: The most common etiologic agents responsible for exudative and non-exudative pharyngitis are viruses, particularly adenovirus, and coxsackie viruses. The E-B virus of infectious mononucleosis may also produce pharyngitis. Of the bacteria, group A streptococci cause 99 per cent of the cases of bacterial pharyngitis. It should be emphasized that there is no reliable clinical means of differentiating viral from bacterial pharyngitis. The presence of coryza and cough tend to rule out streptococcal pharyngitis; however, a complete overlap of signs and symptoms may occur.

The question as to whether treatment of acute streptococcal pharyngitis affects the incidence of non-suppurative complications, that is, acute glomerulonephritis and acute rheumatic fever, is still unresolved. Treatment is important for prevention of the suppurative complications: sinusitis, otitis media, meningitis, brain abscess, pneumonia, bacteremia, erysipelas, peritonsillar and retropharyngeal abscesses. Treatment is also important to eradicate the organism from the community in order to prevent infection in susceptible individuals.

Because of the difficulty in clinical diagnosis, all patients with pharyngitis should have a throat culture. The question is how does one decide whom to treat before the results of the culture are known. This may be of little importance during the 48 hours before such results are known and probably makes little difference in the development of non-supportive complications. Nevertheless, the following scheme may be useful:

(1) If the patient is systemically ill with fever, nausea, vomiting and tender adenopathy, antimicrobial agents should be started after obtaining a throat culture. If the throat culture is positive at 48 hours treatment should continue. If the throat culture is negative, but the patient feels better at 48 hours, continuance of the full course of treatment is indicated (conventional culturing techniques are approximately 80 per cent efficient in recovering group A streptococci from cases of streptococcal pharyngitis). If the throat culture is negative at 48 hours, however, the antimicrobial agent treatment must terminate, but observance of the patient should be maintained.

(2) If the patient is not systemically ill, a throat culture should be obtained with treatment based on the results detected.

Acute group A streptococcal pharyngitis:

Specific antibiotics recommended:

(1) Penicillin V 500 mg. PO QID for 10 days or (2) Benzathine penicillin 1.2 million units IM for one dose.

In patients allergic to penicillin: An erythromycin 500 mg. PO QID for 10 days.

(*Note*: Sulfonamides and tetracycline are not indicated for the treatment of acute group A streptococcal pharyngitis.)

Chemoprophylaxis of recurrent rheumatic fever in patients with known rheumatic heart disease should be carried out with rare exception throughout life with the following drugs:

(1) Benzathine penicillin 1.2 million units IM every four weeks or (2) Penicillin V—250 mg. PO BID.

In patients allergic to penicillin:

(1) Erythromycin 250-500 mg. PO BID or (2) Sulfisoxazole 500 mg. PO BID.

Sinusitis: As defined in this article, sinusitis denotes a specific infection of one or more of the paranasal air spaces with accompanying signs and symptoms of inflammation. These may include pain, heat, erythema, and tenderness to palpation over the involved area. In addition, characteristic radiologic signs usually accompany acute sinusitis. The causative organisms are generally staphylococci, streptococci, and pneumococci in adults. In children, the same organisms are noted and, in addition, *Hemophilus influenzae* is also found.

In diagnosing sinusitis, nasopharyngeal culture is more helpful than throat cuture.

Standards of treatment include both oral and nasal decongestants in addition to antibiotics. If drainage is not established by this means, surgical intervention is indicated. Brain abscess, meningitis, and cavernous sinus thrombosis are among the complications of untreated or poorly treated sinusitis.

Acute sinusitis: Specific antibiotics recommended:

A. Outpatient use:

(1) Children nine years of age or younger —ampicillin 50 mg./kg./day p.o. divided into six-hour intervals for 14 days.

(2) Adults and children older than nine years of age—Penicillin p.o. 250-500 mg. every six hours for 14 days.

B. Inpatient use:

(1) Children younger than nine years of age—ampicillin 150-200 mg./kg./day given intravenously.

(2) Adults and children older than nine years of age—ampicillin 6-12 gms./day intravenously.

If *Staphylococcus aureus* is the offending agent, a penicillinase-resistant penicillin such as oxacillin, six to eight gms./day intravenously, is the drug of choice.

In penicillin-allergic individuals, administration of an erythromycin for outpatients and a cephalosporin intravenously for inpatients should be considered.

Otitis media: The bacteriology of otitis media is similar to that of sinusitis. Otitis media probably begins as a viral pharyngitis that causes lymphoid hyperplasia around the nasopharyngeal opening of the Eustachian tube. This subsequently leads to a negative pressure in the middle ear, and serous fluid then fills the cavity. If it remains stagnant, infection and otitis media result. Treatment is again begun by establishing drainage, either medically or surgically, and treating the underlying infection. The drugs used for these purposes are the same as outlined under the treatment of sinusitis.

Bacterial Pneumonia: Therapy of bacterial pneumonia should be guided by the results of sputum gram stain as well as by culture of sputum, blood and pleural fluid if available. Certain siutations such as involvement of more than one lobe, infection elsewhere, presence of bacteremia, pregnancy, cirrhosis, renal failure, valvular heart disease or congestive heart failure should prompt one to treat with higher doses of antibiotics for longer periods of time than in the uncomplicated case.

Pneumococcal Pneumonia causes 90 per cent of bacterial pneumonia and occurs in all age groups. Treatment of uncomplicated pneumococcal pneumonia is by use of:

(1) Aqueous crystalline penicillin G—500,000 to 1,000,000 units intravenously every four hours for 24 afebrile hours or,

(2) Procaine penicillin G—600,000 to 1,200,000 units intramuscularly every 12 hours for 24 afebrile hours, then,

(3) Oral penicillin V—500 mg. every six hours for five afebrile days.

In patients allergic to penicillin: Cephalothin 6-12 gm./day intravenously followed by oral cephalexin at a dose of 500 mg. every six hours for five afebrile days.

Staphylococcal Pneumonia: One should think of staphylococcus as the causative organism in any individual who develops bacterial pneumonia subsequent to a viral illness. For practical purposes, staphylococci should be considered to be initially resistant to penicillin. Because of the extremely virulent nature of this organism, treatment should be given parenterally for four weeks. Antibiotics recommended are:

(1) Oxacillin—6-8 gms./day intravenously for four weeks.

In patients allergic to penicillin:

(1) Cephalothin—12 gms./day intravenously for four weeks.

(2) Clindamycin—2.7 gms./day intravenously for four weeks.

Group A Streptococcal Pneumonia: Streptococcal pneumonia may be associated with a serosanguinous pleural effusion that characteristically occurs very early in the clinical course of the infection. Because of the virulent nature of the organism, parenteral therapy should be continued for 14 days in uncomplicated cases. In those cases complicated by empyema, therapy should be continued for 28 days parenterally. Antibiotics recommended: Aqueous crystalline penicillin G—6-10 million units/day IV.

In patients allergic to penicillin: Cephalothin up to 12 gms./day IV.

Hemophilus influenzae Pneumonia: This entity is more commonly seen in children; however, it may occur in adults who suffer from underlying chronic pulmonary disease or immune deficiency states. Antibiotics recommended are: Ampicillin 6-12 gms./day intravenously for 14 days.

In patients allergic to penicillin: Chloramphenicol four to six gms./day intravenously for 14 days.

Klebsiella Pneumonia: This infection is predominantly seen in alcoholics and other debilitated individuals and tends to occur in the upper lobes. The sputum is characteristically very thick and tenacious. This disease needs to be treated vigorously for 28 days because of the association of abscess formation and high mortality. Antibiotics recommended are:

(1) Cephalothin 12 gms./day intravenously *plus* Kanamycin one gram/day intramuscularly.

(2) Kanamycin one gram/day intramuscularly alone *or*

(3) Chloramphenicol four to six gms./day intravenously *plus* Streptomycin one gram/day intramuscularly.

Pseudomonas Pneumonia: Although relatively rare, hospital-acquired opportunistic infections with this organism have markedly increased in the past several years. Pseudomonas pneumonia should be thought of in the hospitalized debilitated patient with pneumonia, especially if he has previously received multiple antibiotics. Antibiotics recommended are:

(1) Carbenicillin 30-40 gms./day intravenously for 14 days *plus* Gentamicin 3-5 mg./kg./day parenterally for 14 days.

(2) Gentamicin 3-5 mg./kg./day parenterally for 14 days alone *or*

(3) Tobramycin 3-5 mg./kg./day intravenously for 14 days.

(*Note*: Parenteral carbenicillin should never be used alone for the treatment of pseudomonas infections because of the high degree of resistance noted.)

Other Gram-Negative Pneumonias: Therapy of other gram-negative pneumonias should be guided by the sensitivities of the particular organism involved.

Aspiration Pneumonia: This entity commonly involves the dependent portions of the lung when the patient is lying down. Although etiologic agents vary, anaerobes, especially anaerobic streptococci and *Bacteroides,* are usually involved, and abscess formation is common. Parenteral therapy should be maintained for 14 days in the absence of abscess formation and continued for a total of 28 days if empyema and abscesses develop. Antibiotics recommended are:

(1) Aqueous crystalline penicillin G—20 million units/day intravenously for 14 days.

(2) Clindamycin—1.0 to 2.7 grams/day intravenously for 14 days.

In patients allergic to penicillin: Clindamycin —2.7 grams/day intravenously for 14 days.

Pneumocystis Carinii Pneumonia: This infection occurs primarily in patients wtih malignant diseases or those who have received organ transplants, and it is found particularly in those receiving immunosuppressive agents. Premature infants and children with hypogammaglobulinuria are susceptible as well. The diagnosis is confirmed by lung biopsy. Antibiotics recommended are:

(1) Pentamidine isethionate—4 mg./kg./day parenterally for 12-14 days.

(2) Pyrimethamine—25 mg./day PO and sulfadiazine, 1 gram QID for 12-14 days.

Meningitis

In order to deal with meningitis properly, the clinician needs to be able to answer certain questions. These include:

1. Which drugs cross the blood brain barrier and how well do they cross relative to each other (Table 1)?

2. What organisms are present in which age groups?

TABLE 1

Well	*Well When Inflamed*	*Poorly When Inflamed*	*Does Not Cross*
Chloramphenicol	Penicillin	Kanamycin	Polymixins
Sulfisoxazole	Ampicillin	Gentamicin	Colymicin
Isoniazid	Carbenicillin	Streptomycin	
		Clindamycin	
		Tetracycline	

(a) Birth to three months: predominantly gram-negative organisms with some staphylococci and streptococci.

(b) Three months to 10 years: predominantly *H. influenzae.*

(c) Ten to 40 years: predominantly meningococci and pneumococci.

(d) Over 40 years: predominantly pneumococci, occasionally gram-negative species.

3. When the gram stain of the CSF is negative, what other clues may be helpful in identifying the causative organisms?

(a) meningococcal meningitis may be associated with: (1) rash (2) myalgias, arthralgias and *severe* headache, and (3) herpes simplex mouth lesions.

(b) pneumococcal meningitis may be associated with: (1) pneumonia, sinusitis, or otitis; and (2) herpes simplex mouth lesions.

(c) *Staphylococcus aureus* meningitis may be associated with furuncles.

(d) *Staphylococcus epidermidis* meningitis may be associated with holter valves.

(e) proteus and pseudomonas meningitis may be associated with CNS anatomical defects.

4. What should the initial therapy of suspected bacterial meningitis be when the gram stain of CSF is negative?

(a) Birth to three months: Ampicillin 250-500 mg./kg./day IV and Kanamycin 15 mg./kg./ day IM; or ampicillin and gentamicin 3-5 mg./kg./day IV, IM.

(b) Three months to 10 years: Chloramphenicol 50-100 mg./kg./day IV.

(c) Ten to 40 years: aqueous crystalline penicillin G 2 million units IV every two hours *or* chloramphenicol four to eight gms. per day IV.

(d) Over 40 years: aqueous crystalline penicillin 2 million units IV every two hours *or* penicillin and kanamycin 0.5 gm. IM every 12 hours if gram-negative organism is suspected; *or* chloramphenicol four to eight grams per day IV.

5. Once the etiologic agent is known, what therapy should be instituted?

(a) Pneumococcal meningitis: aqueous crystalline penicillin G 2 million units IV every two hours for two weeks. If the patient is allergic to penicillin: chloramphenicol four to six grams/day IV for two weeks.

(b) Meningococcal meningitis: aqueous crystalline penicillin G 2 million units IV every two hours for two weeks. In the penicillin-allergic patient: chloramphenicol four to six grams/day IV for two weeks.

Prophylaxis for meningococcal infection: (1) for sulfonamide-sensitive organisms: sulfisoxazole one gram by mouth twice a day for two days; and (2) for sulfonamide-resistant organisms: rifampin 600 mg./day p.o. for four days *or* minocycline 100 mg. p.o. every 12 hours for five days.

(c) *Hemophilus influenzae* meningitis: If the organism is ampicillin-sensitive, ampicillin 12 grams/day IV for two weeks is recommended. If the organism is ampicillin-resistant or the patient is penicillin-sensitive, chloramphenicol—four to six grams/day IV for two weeks should be used.

(d) Staphylococcal meningitis: Oxacillin 10 to 18 grams/day IV for four to six weeks.

(e) Streptococcal meningitis: (1) Group A—Aqueous crystalline penicillin G 2 million units IV every two hours for four to six weeks, and (2) Enterococcal—ampicillin 12 grams/day IV for two weeks. If the patient is penicillin-sensitive, chloramphenicol 4-6 grams/day IV for two weeks.

(f) *Listeria monocytogenes* meningitis: Ampicillin 12 grams/day IV for two weeks. If patient is penicillin-sensitive, erythromycin two to four grams/day IV should be administered.

(g) Pseudomonas meningitis: (1) Carbenicillin 500 mg./kg./day IV *plus* gentamicin five mg./kg./day IV (2) Tobramycin five mg./kg./day IV, and (3) Intrathecal gentamicin or polymixin B five mg./day for four days and then every other day.

(h) Therapy of other gram-negative meningitides should be guided by the antimicrobial sensitivities of the organisms involved.

The duration of therapy should be guided by the clinical course of the patient, but should last a minimum of two weeks.

Endocarditis

Endocarditis classically has been divided into acute and subacute forms. The etiologic agent in the acute form is generally *Staphylococcus aureus* and the extremely virulent characteristics of this organism are what make the disease acute. Subacute bacterial endocarditis, on the other hand, is usually caused by viridans streptococci. The slowly progressive nature of this disease is caused by the relatively less virulent nature of the organism involved. Enterococci are somewhat less virulent than staphylococci and somewhat more virulent than viridans streptococci. Enterococcal endocarditis follows the same pattern as the latter.

Streptococcus viridans endocarditis often occurs following dental manipulation since the organism is part of the normal oral flora. Enterococci are normal inhabitants of the gastrointestinal tract and enterococcal endocarditis is often seen following manipulation of the GI or GU tract. These latter organisms are universally resistant to penicillin alone. *Staphylococcus aureus*, which may be normal flora of the nasopharynx, is frequently seen following open heart surgery and in parenteral drug abusers as a cause of endocarditis.

The bacteremia that occurs wtih endocarditis is continuous. Six blood cultures should be drawn within a 24-hour period. If endocarditis is present, a high percentage of these blood cultures will be positive.

Culture negative endocarditis may be seen with right-sided endocarditis or with a prolonged subacute form where adequate antibodies have formed to prevent growth of the organism on culture media.

Specific treatment:

1. *Streptococcus viridans* endocarditis: aqueous crystalline penicillin G 20 million units/day for four weeks or, if the patient is allergic to penicillin, Cephalothin 12 grams/day IV for four weeks.

2. Enterococcal endocarditis: aqueous crystalline penicillin G 20 million units/day IV *plus* streptomycin 0.5 gram IM twice daily *or* gentamicin three to five mg./kg./day IM for six weeks. If the patient is allergic to penicillin, Vancomycin two grams/day IV for six weeks should be used.

3. *Staphylococcus aureus* (and *S. epidermidis*) endocarditis: Oxacillin 10 to 18 grams/day IV for six weeks. If organism is penicillin-sensitive, aqueous crystalline penicillin G 20 million units/day IV for six weeks. If the patient is allergic to penicillin, Cephalothin 12 grams/day IV for six weeks or Vancomycin two grams/day for six weeks.

4. Culture negative endocarditis: These patients should be treated as if they had enterococcal endocarditis unless the clinical situation dictates otherwise.

5. Prophylaxis for bacterial endocarditis should be instituted in individuals with prosthetic or abnormal heart valves or with congenital heart disease when procedures likely to result in bacteremia are performed.

A. Patient undergoing dental manipulation should receive prophylaxis against viridans streptococci. This may be done in several ways:

(1) Procaine penicillin G 600,000 units and 200,000 units of crystalline penicillin G IM one hour before the procedure and then daily for two subsequent days.

(2) Penicillin V 500 mg. one hour before the procedure and continued every six hours for the remainder of that day and for 48 hours following the procedure.

(3) For patients suspected to be allergic to penicillin or for those on continual oral penicillin for rheumatic fever prophylaxis who may harbor penicillin-resistant viridans streptococci: erythromycin 500 mg. one and one-half to two hours prior to the procedure and then 250-500 mg. every six hours for the remainder of that day and for the two days following the procedure.

(4) In patients already receiving rheumatic fever prophylaxis, procaine penicillin prescribed as above.

(5) Clinical and experimental evidence now available strongly suggests that penicillin alone may not be the best choice for prophylaxis in patients undergoing manipulative procedures. This is probably because penicillin kills oral streptococci relatively slowly and leaves a proportion of survivors. The addition of an aminoglycoside antibiotic enhances the rate and completeness of bacterial killing; and

therefore, future recommendations might suggest the following drug regimen for dental manipulations: aqueous crystalline penicillin G 2 million units *plus* procaine penicillin 600,000 units IM *plus* streptomycin 1.0 gram IM 30 minutes before the procedure.

B. Patients undergoing gastrointestinal or genitourinary manipulation should receive prophylaxis directed against the enterococcus.

(1) Ampicillin one gram IV immediately before the procedure and then every four hours for a total of 24-48 hours after the procedure.

(2) Ampicillin 500 mg. by mouth the morning of and immediately before the procedure, one hour after it, and then every four hours for a total of 48 hours.

(3) Procaine penicillin G 1.2 million units every eight hours IM plus streptomycin 500 mg. IM every 12 hours. Both drugs should be started one hour before the procedure and continued for 24-48 hours afterwards.

(4) Ampicillin one gram IV *plus* gentamicin 80 mg. IM 30 minutes before the procedure, both repeated eight and 16 hours later.

(5) If the patient is allergic to penicillin, vancomycin 0.25 grams IV should be administered one hour before the procedure and every six hours thereafter for 24-48 hours.

Urinary Tract Infections

Urinary tract infections (UTI) can be divided into complicated and uncomplicated forms. A UTI is considered uncomplicated by the authors if the first couple of episodes of infection occur in an otherwise healthy host. A complicated UTI is that which occurs in a person who has had three or more episodes, received multiple courses of antimicrobial therapy, has presence of obstruction, has been instrumented, is diabetic, has renal stones, is an immunosuppressed host, has an indwelling catheter, is hypercalcemic, or etc. The organisms responsible for uncomplicated and complicated UTI differ; 90 per cent of uncomplicated UTI are due to *Escherichia coli* and 90 per cent are sensitive to sulfisoxazole or ampicillin; whereas, in complicated UTI, *E. coli* is the causative agent only 50 per cent of the time and may have varying antibiotic sensitivities. The other 50 per cent are due to *Proteus*, *Pseudomonas*, *Klebsiella*, or enterococci.

The authors suggest the following scheme in handling simple acute cystitis:

(1) Urine analysis (2) Gram stain of urine—it must be remembered that any bacteria seen on an unspun urine means that there is greater than 100,000 bacteria (3) Culture and sensitivity of urine; and (4) Until the results of sensitivity testing are known in some cases, and even as the final definitive therapy in others, sulfonamide treatment may be very effective.

These agents must be used in full doses, since the problem is one of treating the infected bladder tissue and not a "contaminated" or "infected" urine. Sulfisoxazole, four grams initially, followed by one gram every four hours for a period of 12-14 days is the preferred course of treatment.

After the prescribed course of therapy has been completed, patients should be seen at weekly intervals for one to two months and their urine studied microscopically and bacteriologically in order to detect relapse. When recurrence of the infection is noted, retreatment with an appropriate drug should be initiated promptly.

If a female develops more than two urinary tract infections, a thorough investigation for the presence of any lesion must be undertaken including intravenous or retrograde pyelography and cystoscopy. The possibility of pyelonephritis, obstruction, tumors, or stones must always be considered.

Chronic or relapsing urinary tract infection is often associated with obstruction. Therapy must be guided by culture and organism susceptibility. Treatment is usually continued for one month with appropriate antibiotics, often with utilization of a suppressant drug such as methenamine mandelate on a chronic basis.

Acute Pyelonephritis

This is usually a severe illness associated with chills, high fever, costovertebral angle pain and leukocytosis. The urine usually contains many leukocytes (some of which are clumped), white blood cell casts, red blood cells, albumin, and a large number of bacteria. Gram stain, as well as cultures of the urine, should be performed, and blood cultures obtained.

Acute pyelonephritis should be treated for a minimum of 14 days parenterally with:

(a) kanamycin 15 mg./kg./day IM (b) gentamicin three to five mg./kg./day IM, IV (c) tobramycin three to five mg./kg./day (d) chloramphenicol four gm./day IV; and (e) ampicillin 6-12 gm./day IM, IV.

The final choice of the antimicrobial agent is guided by culture and sensitivity results. Oral treatment is instituted for another two weeks after completing parenteral therapy.

Bone and Joint Infections

Suppurative Arthritis: A variety of etiologic factors may be responsible for acute and chronic arthritis. One of these is bacterial infection. Acute suppurative arthritis may be secondary to (1) the introduction of organisms in the synovia or joint space as a result of injury (2) spread from osteomyelitis (ends of bones) which perforates the periosteum and allows infection of the intracapsular space; or (3) the deposition of bacteria in the synovial membranes during bacteremia.

Suppurative arthritis demands immediate recognition and treatment if destruction of tissue and chronic crippling is to be avoided. To identify infectious from non-infectious arthritides, examination of the synovial fluid and the obtaining of blood cultures are necessary.

To aid in the diagnosis, the synovial fluid should be examined for (1) *purulence;* (2) number of cells and type; (3) presence of bacteria by gram-stain and culture; and (4) blood sugar, since there is a decreased blood sugar in bacterial infection.

It should be remembered that blood cultures should be obtained in every case; in some instances, the causative organisms may be recovered from the blood earlier and with greater ease than from the exudate in the joint space.

The type of antimicrobial agent used depends on the nature of the bacteria causing the disease and its sensitivity pattern. We do not advocate instillation of antimicrobial agents into the joints because they produce infection of the bone most commonly in children: *H. influenzae*, *S. aureus*, and *beta hemolytic streptococcus* are most often involved. In adults, the gonococcus is the most common cause. Aqueous crystalline penicillin G IV at 12 million units per day for 14 days is recommended.

Acute Osteomyelitis: This infection occurs primarily during childhood and adolescence, with the most common age group affected being 8 to 16 years. Patients have severe symptoms of toxicity in addition to local pain and swelling. Blood cultures are usually positive. Bacterial invasion of the bone takes place by one of three routes:

(1) Spread from an infectious process in the surrounding soft tissues.

(2) Direct introduction in compound fractures.

(3) Hematogenous implantation during course of bacteremia (transient or prolonged).

A history of trauma is obtained in two-thirds of the cases, with this being the most important predisposing factor. Other factors include skin infections, tooth extraction, infected open wounds, carbuncles, decubitus ulcers, subacute bacterial endocarditis, or in the neonatal period, following an infected cephalhematoma or umbilical cord, etc.

The diagnosis is suspected on basis of signs and symptoms, history of trauma, and "point tenderness" in the involved bone. Blood cultures as well as needle or drill aspiration of the bone should be carried out. An operation for drainage may be necessary if pus is found. Treatment should be a minimum of four weeks with parenteral therapy with the antibiotic chosen on the basis of the results obtained from the bone culture or blood culture.

Chronic or Recurrent Osteomyelitis: Primary treatment includes surgical excision of the necrotic bone and institution of antimicrobial therapy according to results of culture and sensitivity tests. Long-term antimicrobial therapy (two to four months) is necessary.

Gram-Negative Bacteria and Shock

The most common source of gram-negative bacteremia is the GU tract. Sixty to eighty per cent of all cases are related either to a manipulative procedure, a urinary tract infection, or an indwelling urinary catheter. Other sources are the GI tract (following surgery), the biliary system (with cholecystitis or cholangitis), the skin (burns), and the use of intravenous catheters. Treatment cannot, of course, be withheld while waiting for the results of blood culture(s). Therefore, an antibiotic whose spectrum of antimicrobial activity will include most of these possible pathogens must be administered. The authors recommend gentamicin five mg./kg./day alone as initial therapy for gram-negative bacteremia. In patients where pseudomonas sepsis is highly

suspect, carbenicillin 30-40 gm./day is added: however, if sepsis is thought to be due to either gram-positive or gram-negative bacteria, a penicillinase-resistant penicillin (such as oxacillin), a cephalosporin or clindamycin should be added to gentamicin for initial therapy. Clindamycin at 2.7 gm./day IV is particularly useful if one suspects *Bacteroides fragilis* as the causative organism. Following identification and sensitivity tests, specific therapy with the most appropriate drug should be instituted. The usual couse of therapy is 10-14 days.

The value of high dose steroids remains very controversial. There is an agreement, however, that if they are used, it should be as early as possible and in very large doses (4-10 gms. hydroccortisone or an equivalent).

Therapy for shock is very important. If the central venous pressure is low, increase the blood volume with blood, albumin or plasma expanders. Metabolis acidosis should be corrected with sodium bicarbonate.

Gastrointestinal Infections

Gastrointestinal infections associated with diarrhea may be caused by a diverse group of pathogens. A distinction should be made between small-bowel and large-bowel diarrhea. The former generally is associated with epigastric pain and large volumes of watery fecal material that do not contain blood or mucus. The etiologic agents are often enterotoxin-producing bacteria such as *E. coli* (the pathophysiological events are the same as in Asiatic cholera, although *E. coli* disease is milder). Food-poisoning organisms such as *S. aureus* and *Clostridium perfrigens* act in a similar fashion. Antimicrobial therapy is seldom required. Since these diseases are self-limiting, the main therapeutic consideration is fluid and electrolyte replacement.

On the other hand, diarrhea originating from the large bowel tends to be associated with a smaller fecal volume, lower abdominal pain, and tenesmus. Many patients will pass gross blood and mucus, and microscopic examination will reveal sheets of white blood cells in the stool. The principal pathogens recovered are Shigella, penetrating strains of *E. coli* or *Yersinia*. The role of antibiotics in these infections is unclear, and many patients will respond to symptomatic therapy. Patients with severe or prolonged bacillary dysentery should receive antibiotics.

General recommendations are as follows:

Salmonella Infections:

(a) antibiotics should not be given to patients with gastroenteritis since therapy has no effect on the clinical course and may prolong the presence of the organism in the stool.

(b) bacteremia should be treated with antibiotics:

1. chloramphenicol 500 mg. q six hours IV *or*
2. ampicillin 8-12 grams day IV.

(c) typhoid and enteric fever:

1. Therapy as above. Chloramphenicol is the drug of choice for 14 days.
2. Trimethoprim/sulfamethoxazole two tablets every six hours for 14 days is preferred if the organism is resistant to both chloramphenicol and ampicillin.

(d) chronic carrier state-stool cultures remain positive for more than a year: Ampicillin six to eight gms./day p.o. with probenecid for six weeks.

Shigella Infections:

(a) antimicrobial therapy decreases both the duration of symptoms and the period of excretion of organisms. Multiple drug resistance is common so therapy should be guided by sensitivity tests. Ampicillin four to eight gm./day p.o. is the agent of choice with oral kanamycin and tetracycline as alternative agents.

(b) enteropathogenic *E. coli*: usually a disease of infants, but a few epidemics have occurred in adults. Sensitivity testing is a necessity for appropriate treatment. Neomycin 100 mg./kg./day p.o. for three to five days is considered the drug of choice.

Skin and Soft Tissue Infections

Impetigo: Characterized by superficial vesicopustules which readily rupture, leaving weeping denuded areas with yellow crusts. This infection is most often a disease of childhood and is due to *Staphylococcus aureus* or *Group A beta hemolytic Streptococcus*. Specific streptococcal types (nephritogenic) may be associated with complicating acute glomerulonephritis.

Local treatment consists of Phisohex® washes to remove crusts, and topical application of bacitracin ointment. Antimicrobial therapy hastens clearing and should be used in all but the mildest cases. Some authors recommend benzathine penicillin 600,000 units IM and/or penicillin V one to two gm./day orally. The authors prefer to have antistaphylococcus coverage as well, and use cloxacillin or dicloxacillin at a dose of two gm. per day orally. An erythromycin at a dose of one to two gm./day is an excellent agent to use in the penicillin-allergic patient.

Folliculitis: A pyoderma, located within a hair follicle, most often due to *S. aureus*, and superficially occurring as small dome-shaped pustules at the opening of the hair follicle characterizes folliculitis. Deep folliculitis (sycosis barbae) is associated with perifollicular inflammation occurring in the bearded areas of the face. Local treatment with warm soaks and antibiotic ointment is usually sufficient.

Furuncles and Carbuncles: A furuncle or boil is a deep-seated, inflammatory nodule which develops about the hair follicle usually from a preceding more superficial folliculitis. A carbuncle is a more extensive, deeper infiltrated lesion which develops when suppuration occurs in thick, inelastic skin. Both are staphylococcal infections and may lead to severe systemic manifestations, the major complications resulting from bacteremic spread of infection. Recurrent furunculosis may be a very troublesome problem occurring in family epidemics. Treatment consists of local application of moist heat and drainage of the lesion in severe cases. Often antistaphylococcal drug therapy is required. The following list contains the recommendations of the authors:

Mild-Moderate Case: (1) cloxacillin or dicloxacillin two gm./daily p.o. (2) an erythromycin one to two gm./day p.o., and (3) cephalexin one to two gm./day p.o.

Severe Case: (1) oxacillin or nafcillin four to eight gm./day IM or IV (2) cephalothin 4-12 gm./day IV, and, (3) clindamycin 1.8-2.7 gm./day IM or IV.

In patients with chronic recurrent infection, the skin is probably being seeded with organisms carried in the anterior nares. Application of an antibacterial cream or ointment to the affected areas of the body and anterior nares daily is appropriate therapy. Use of an antibacterial soap (phisohex®, Dial®) may be of some benefit. It should be remembered that the antistaphylococcal drugs may give temporary benefit, but cannot be relied upon to eradicate the carrier state.

Erysipelas: This entity shows a characteristic type of superficial cellulitis of the skin with marked lymphatic vessel involvement due to group A (or very uncommonly group G) streptococci of any M antigenic type. Occasionally, a similar clinical picture may be produced by infection with *S. aureus*. Erysipelas occurs commonly on the face of infants and older adults with the lesion having a characteristic brawny, edematous, indurated (peau d'orange) appearance which spreads peripherally, and a margin which is sharply demarcated from the normal surrounding skin. In children, treatment consists of aqueous crystalline penicillin G IV 100,000 units/kg./day. Aqueous crystalline penicillin G IV 6-12 million units/day is the drug of choice for adults. A cephalosporin (such as cephalothin 6-12 gm./day IV) or clindamycin 1.8-2.7 gms./day IM or IV is the alternative therapy in a penicillin-allergic patient.

Cellulitis: Defined as an acute inflammatory reaction involving the skin and deeper subcutaneous tissue exhibiting a tendency to spread, Group A streptococci or *S. aureus* are by far the most common etiologic agents, but occasionally other bacteria are involved. The involved area is red, hot, and indurated with indistinct borders. Clinically, signs of systemic infection are usually present. Patients who are systemically ill require parenteral antibiotics. Initial therapy should be oxacillin or nafcillin six to eight gms./day parenterally pending cultures. In the penicillin-aller-

gic patient, cephalothin 6-12 gms./day IV or clindamycin 1.8-2.7 gms./day IV or IM is an alternative. If a streptococcus is isolated, parenteral aqueous crystalline penicillin G 6-12 million units/day IV should be substituted.

Lymphangitis: An infection which involves the subcutaneous lymphatic channels, and is most often due to group A streptococci and occasionally *S. aureus*. Usually occurring secondarily to a wound on an extremity, lymphangitis is manifested by red linear streaks which extend from the local lesion toward regional lymph nodes. The patient is usually quite toxic with bacteremia a distinct possibility. Parenteral aqueous crystalline penicillin G 10-20 million units/day IV is the preferred agent with a penicillinase-resistant penicillin, a cephalosporin, or clindamycin in high doses as alternative agents.

Clostridial Myonecrosis: This disease is characterized by sudden onset, severe pain and swelling, as well as extreme toxemia. The muscle appears necrotic with gas in small amounts being present around it. Gram-positive rods are demonstrated on smears from the muscle. Radical surgery and large doses (> 20 million units/day) of intravenous aqueous crystalline penicillin G are the mainstays of therapy. Many clinicians utilize antitoxin and hyperbaric oxygen; however, the value of this means of treatment remains unresolved.

Venereal Diseases

Not only have gonorrhea and syphilis been reported with increasing frequency each year, but the national venereal disease problem has already reached epidemic proportions. Gonorrhea alone afflicts at least two million individuals each year. The reasons for the continued rise in the incidence of gonorrhea and syphilis are varied. Inadequate screening procedures, poor reporting by physicians which hampers location of contacts, failure to utilize condoms, etc. are just a few of the reasons.

Gonorrhea in males presents itself usually two to ten days after contact with an infected source. A milky urethral discharge associated with meatal pain, especially upon voiding, are the common presenting symptoms. Extension of the infection to the seminal vesicals and prostate may occur if the patient goes untreated. In 50-70 per cent of women there are no symptoms of the disease; however, a purulent uretheal discharge is frequently present. Dysuria and urgency may also occur. Untreated women may develop pelvic inflammatory disease (PID) as a further problem.

Syphilis, which is caused by *Treponema pallidum*, may be categorized into four stages: (1) primary, (2) secondary, (3) latent (early and late), and (4) late syphilis.

Primary syphilis is that stage where there is chancre development and healing. Secondary syphilis is marked by the manifestation of a maculopapular rash, usually of the palms of the hands and soles of the feet. There may be mucous membrane involvement as well as systemic symptomology (fever, malaise, etc.). Latent syphilis has no clinical lesions associated with its presence. Positive serological tests are the only manifestations of this stage of the disease. The latent stage is divided into early latent, which is of less than four years duration, and late latent, which is greater than four years duration. Early latent syphilis is infectious if there is relapse to the secondary stage. Late latent syphilis is considered noninfectious. Late syphilis involves nearly

TABLE 2

Venereal Diseases—Treatment

Gonorrhea

Uncomplicated gonorrhea in men and women:
Treatment of Choice:

Aqueous Procaine Penicillin G 4.8 million units in two injections at two sites at one visit together with one gm. of probenicid just before the injections.

Alternatives:

1. Ampicillin 3.5 gm. by mouth and one gm. of probenecid administered at the same time.
2. Tetracycline HCl 1.5 gm. by mouth followed by 500 mg. by mouth four times a day for four days.
3. Spectinomycin HCl two gm. IM in one injection.

Pharyngeal Gonorrhea:

1. 4.8 million units of Aqueous Procaine Penicillin G plus one gm. of probenicid.
2. Tetracycline HCl 1.5 gm. initially by mouth followed by 500 mg. by mouth four times per day for four days.

Note: Spectinomycin and ampicillin in the above schedules are ineffective for pharyngeal gonorrhea.

Syphilis

Primary, secondary and latent stages:

1. Procaine penicillin G 600,000 units IM per day for ten doses.
2. Benzathine penicillin G 2.4 million units IM in two injections at one visit once a week for two weeks.
3. For penicillin-allergic patients, tetracycline HCl 500 mg. by mouth four times a day for 15 days.

Late stage:

1. Benzathine penicillin G 3.0 million units IM at seven-day intervals for three doses (total dose 9.0 million units).
2. Procaine penicillin G 600,000 units IM per day for 15 days.
3. For penicillin-allergic patients, tetracycline HCl 0.5 gm.—1 gm. four times a day for 20 days.

every organ of the body. Involvement of the central nervous system and cardiovascular system are the causes of the majority of deaths due to syphilis.

The diagnosis of gonorrhea is based upon the clinical presentation with confirmation of the disease by culturing of *Neisseria gonorrheae* on the appropriate medium. Primary and secondary syphilis are diagnosed by dark field examination of fluid expressed from the lesions and confirmed by serologic tests such as the VDRL. Latent syphilis may be diagnosed by the use of one or more serologic tests with the VDRL being the widely used screening test. In a patient with a positive VDRL and no clinical evidence of syphilis, however, a more specific serologic test should be done such as the fluorescent treponemal antibody test with absorption technique (FTA-ABS). This is performed in order to rule out a biologic false positive test and to confirm the diagnosis of syphilis. Late syphilis is characterized by clinical symptomology depending upon what organ or system of the body is involved as well as positive serological tests.

The treatment of gonorrhea and syphilis has been summarized in Table 2.

Conclusion

It is the hope of the authors that, with the information presented in this article, there will be an increased realization by the clinician that the underlying principle in the treatment of common infectious disorders is rational drug selection and utilization. It will be by following such schemes as presented here that the patient will ultimately be the benefactor and the clinician, the true health care provider.

Manuscript Information

Manuscripts to be presented for publication in *The West Virginia Medical Journal* should be typewritten, triple-spaced, on one side only of firm (no onion skin or flimsy), standard letter sized (8 1/2 by 11 in.) white paper. Wide margins (at least 1 1/4 in. on left) should be left free of typing. On the first or title page should be shown the title of the article, the name (or names) of the author, and his degrees. Pages should be numbered consecutively, the page number being shown in the right upper corner along with the surname of the author.

Authors are requested to submit a carbon copy with the original.

Illustrations should be numbered and their approximate locations shown in the text. Each should be identified by placing on its back the author's name, its number and an indication of its "top." Drawings and charts intended for reproduction should be done in black (India) ink on pure white. Photographs should be on glossy paper and minimum of about 5 by 7 in. in size. A legend should be provided for each illustration and, preferably, attached to it.

All scientific material appearing in *The Journal* is reviewed by the Editorial Board. Manuscripts should be mailed to The Editor, West Virginia Medical Journal, Box 1031, Charleston, W. Va. 25324.

PART IV: ANTIMICROBIAL THERAPY SERIES

Complication Of Antimicrobial Therapy
(An Overview)

Jack L. Le Frock, M. D.; Randall A. Prince, Pharm. D.; Arthur I. Jacknowitz, Pharm. D.; And Perry M. Kalis, M. D.

Complications resulting from the widespread use of various chemotherapeutic agents are steadily increasing in frequency. The problem of adverse reactions to antibiotics should concern all physicians, since all the available drugs produce untoward effects which must be considered at the time of initiating therapy. Physicians must now be concerned not only with treating infections, but also with the diseases that may be caused by such treatment. The complications of antibiotic therapy have been divided into five categories along with the mechanisms and susceptible organs (Table1).

Nephrotoxicity

Renal disease, with or without functional impairment, may be complicated by infections; and, of course, diseases of an infectious nature are also frequently accompanied by abnormalities in renal function. There are several approaches the clinician may take when confronted with the treatment of serious infections with potentially nephrotoxic agents. They are to (1) avoid a potentially nephrotoxic agent, (2) use an agent metabolized by the liver, and (3) use a potentially nephrotoxic agent with appropriate reduction of dosage. As a general rule, nephrotoxic antibiotics can be administered safely and effectively if an appropriate alteration in dosage is used when renal impairment is present.

A large number of antibiotics currently in clinical use have a potentially nephrotoxic effect (Table 2). It is fortunate that the nephrotoxicity of these drugs appears to be largely reversible, if their administration is discontinued soon enough. It is essential that when these agents are administered renal function is regularly monitored. Patients having preexisting renal disease appear to be particularly sensitive to many of these agents, but even uremic patients should not be denied the life-saving effects of these drugs when they are indicated. The concomitant use of other potentially renal toxic agents should be avoided or should be undertaken with great caution.

Neurotoxicity

The neurological complications of antibiotic therapy are many and varied. Although the ototoxic effects of antibiotics are by far the most important neurological complications, penicillin encephalopathy, ocular toxicity, peripheral neuropathy, and myasthenic syndrome (neuromuscular blockade) will be discussed.

TABLE 1
Complications of Antibiotic Therapy

Complication	*Mechanisms*	*Susceptible Organs*
Local effects	Irritation at site of administration	muscle, vein
Direct Toxicity	Pharmacologic side effects or from accumulation due to excessive dosage or decreased excretion	kidney, ear, liver, bone marrow, bowel, eye, skin, CNS, peripheral nervous system
Superinfection	Alteration of normal flora	skin, respiratory tract, gastrointestinal tract
Hypersensitivity	Antigen-antibody phenomena, Immunologic phenomena	whole body, specific organs (skin, kidneys, lungs, vessels, blood) serologic, collagen vascular
Miscellaneous	Fetus, Genetic abnormality	ear, teeth, teratogenic effects, blood (various enzyme deficiencies, bone marrow)
	Immaturity (Neonate)	brain, teeth, general

TABLE 2
Antimicrobial Agents Associated with Renal Complications

Major Direct Nephrotoxicity	*Minor Direct Nephrotoxicity*	*Hypersensitivity*
Kanamycin	Gentamicin	Penicillin
Neomycin	Streptomycin	Semi-synthetic Penicillins
Colistimethate	Sulfonamides	Sulfonamides
Polymixin B	*Rifampin	Nitrofurantoin
Bacitracin	*Capreomycin	Para-aminosalicylic acid
Vancomycin	*Cephalothin	
Amphotericin	*Tetracycline (except doxycycline)	
Cephaloridine		

*Rise in BUN without other evidence of nephrotoxicity.

Ototoxicity: The ototoxic reactions are among the most common and serious side effects of antibiotic usage with potential for causing severe deafness and vestibular impairment. The antibiotics which have been associated with damage to the inner ear are listed in Table 3. Interestingly, all are derived from streptomyces organisms except gentamicin and colistin, and all are nephrotoxic as well. The ototoxic antibiotics are removed from the body mainly by the kidneys and to a small extent by the liver. The action of the ototoxic drugs on specific parts of the inner ear is shown in Table 3.

Hearing loss may or may not be heralded by tinnitus or a feeling of fullness in the ear. Hearing for high tones is usually affected first and total deafness may follow. The damage may appear after a latent period, can progress despite withdrawal of the drug, and is nearly always permanent. It is extremely important to familiarize the patient with the warning signs and, when practical, to monitor the administration of these drugs regularly with audiometry. The loss of vestibular function starts with dizziness and vertigo and can progress to severe, persistent, and incapacitating ataxia. After some time, improvement often occurs from compensatory mechanisms.

The major factors which determine ototoxicity seem to be the plasma concentration and the duration of exposure to the drug. Plasma concentration is governed by absorption and excretion. By far, the most important cause of excessive blood levels and, hence, of iatrogenic deafness is insufficient excretion due to renal failure. Renal function should be assessed before and during treatment.

The concomitant or successive use of two or more ototoxic drugs, along with renal immaturity, increasing age, and pre-existing disease of the inner ear, are also factors which predispose the patient to the development of ototoxicity. Use of ethacrynic acid, a potent diuretic, should be avoided in patients who are being treated with aminoglycoside drugs such as kanamycin or gentamicin. Ethacrynic acid has produced deafness by itself or in conjunction with the aminoglycosides in patients with impaired renal function.

Vestibular dysfunction of the eighth cranial nerve may be produced by streptomycin, gentamicin, and tobramycin. Vertigo and its accompanying signs and symptoms occur in the acute stage which is followed by a chronic phase in which ataxia is the most prominent feature.

The ototoxicity of gentamicin appears to occur in two per cent of patients treated and is related primarily to labyrinthine dysfunction, but auditory complications may also occur. The presence of prior otologic disease and previous exposure to ototoxic agents appears to be significant. The risk of ototoxicity should not preclude treatment with gentamicin when it is indicated for serious or life-threatening infections.

Neomycin, when administered parenterally, can cause irreversible auditory dysfunction. Ototoxicity can also occur when neomycin is used as an aerosol or irrigating agent, or by topical application in cutaneous burns.

Kanamycin also has the capacity to cause irreversible deafness which may be delayed in onset. Even with normal renal function the recommended dosage of 12 to 15 mg. per kg. of body weight every 24 hours may prove to be ototoxic when the duration of therapy and total dosage of the drug are excessive. In this regard, treatment should not exceed 1.5 grams per day or 20 grams per treatment course.

Ocular Toxicity: Toxic retinopathy and optic neuritis have both been reported in association with chloramphenicol and streptomycin therapy. Isoniazid and ethambutol have also been implicated in optic neuritis. The usual symptoms ranged from blurred vision to complete loss of sight. The cause and effect relationship have not

TABLE 3
Action of Ototoxic Drugs on Hearing and Equilibrium

Drug	*Vestibule*	*Cochlea*	*Kidney*
Colistin	++	+	++
Dihydrostreptomycin	+	++++	+
Gentamicin	++	0	++
Kanamycin	+	+++	+++
Neomycin	+	++++	+++
Streptomycin	+++	+	+
Vancomycin	0	+++	+
Viomycin	+++	++	++

been defined as yet for the ocular toxicity due to these drugs.

Neuropathy: Peripheral neuropathy may occur with the following antibiotics: dihydrostreptomycin, streptomycin, neomycin, kanamycin, chloramphenicol, polymixin B, colistimethate, nitrofurantoin, sulfonamides, amphotericin B, griseofulvin, and isoniazid. The concomitant administration of pyridoxine (50-100 mg./day) will be helpful in preventing isoniazid-induced neuropathy. The syndrome is that of typical metabolic polyneuropathy with symmetrical stocking-and-glove impairment of both motor and sensory nerves. Paresthesia, usually affecting the circumoral and oral regions, may be an adverse effect of these drugs. This reaction is reversible, but is of considerable annoyance to the patient.

Neuromuscular Blockade: Neuromuscular blockade was first observed after the intraperitoneal administration of neomycin during surgery and was the result of absorbed neomycin and not of the intraperitoneal route of administration. It produces a syndrome of severe weakness of the respiratory muscles and limbs, resembling myasthenia gravis but with additional features of pupillary unreactivity and visual changes. Streptomycin, gentamicin, and neomycin potentiate the effects of other neuromuscular blocking agents such as ether and d-tubocurarine, and these effects are antagonized by neostigmine. Kanamycin produces a neuromuscular blockade similar to that produced by succinylcholine; therefore, neostigmine may worsen the blockade. The same is true for colistin and polymycin B. Intravenous calcium is effective in reversing this blockade. All the antibiotics capable of causing neuromuscular blockade should be avoided in anesthetized patients, and care should be used in the concomitant administration of sedatives and narcotics; in addition, they are contraindicated for patients with myasthenia gravis.

Miscellaneous Neurotoxic Reactions: Amphotericin B has been reported to cause a neurotoxic syndrome of tremor, incontinence, mental clouding, flaccid paralysis of arms and legs, and weakness of respiratory muscles.

Cycloserine in doses of greater than one gm. a day particularly is likely to cause myoclonic jerking and other seizures. It may also produce dyskinesias, paresis, tremors and dysarthria, which may be due to interference with pyridoxine metabolism.

Tetracycline may cause increased intracranial pressure as manifested by bulging of the fontanel in infants.

Cerebral toxicity may be associated with Penicillin G given intravenously in doses in excess of 25 million units daily—particularly in the elderly and in persons with renal impairment—producing a syndrome of decreased consciousness, myoclonic jerking, and grand mal seizures. When penicillin therapy is discontinued or dosage is reduced, improvement occurs within several hours.

Pulmonary Complications

The lungs are particularly susceptible to superinfections following the administration of antibiotics, although the presence of abnormal bacteria in the sputum must be critically evaluated to distinguish simple colonization from infection. Many antimicrobial agents have been clearly implicated as inducing some form of lung disease. The clinical syndromes include systemic lupus erythematosus, polyarteritis, pulmonary eosinophilia, and asthma.

Of increasing interest in recent years has been the pulmonary disorder described as pulmonary eosinophilia. The drug most commonly causing this syndrome at present is nitrofurantoin. Penicillin, sulfonamides and para-aminosalicylic acid have also been implicated. Roentgenograms typically show infiltration, especially in the lung bases, with consolidation or effusion.

Drug-induced asthma can present as an immediate hypersensitivity reaction purely in an isolated form or as part of a generalized anaphylactic response. Delayed types of asthmatic reactions to antibiotics have also been seen, occurring after repeated administration of the drug. Penicillin, tetracycline, erythromycin, neomycin, streptomycin, griseofulvin, cephaloridine and ethionamide have been associated with one or both types of asthmatic reactions.

Cardiovascular Complications

The parenteral administration of lincomycin has been reported to cause instances of hypotension. This is usually related to rapid intravenous administration and a few episodes of cardiopulmonary arrest have been reported after rapid or so-called bolus administration.

Dermatologic Complications

Adverse drug reactions are seen more oftcn on the skin than in any other organ or organ system. Drug reactions can cause a variety of morphologic skin changes. The extent and severity of these changes range from the most innocuous patch of redness to extensive and severe eruptions. Some of these may be life threateing, such as SLE, Stevens-Johnson syndrome, toxic-

epidermal necrolysis and exfoliative dermatitis. Fortunately, these serious dermatitides occur infrequently. Familiarity with the severe eruptions is especially important since prompt diagnosis and management may save the patient's life, or prevent undesirable sequelae. Table 4 lists the antibiotics causing serious types of dermatitis.

Gastrointestinal Complication

Although the gastrointestinal tract bears most of the brunt of the complications of antibiotic treatment, most reactions are not serious. Stomatitis and glossitis occur frequently, especially with the use of broad spectrum antibiotics, and one often finds that superinfection with *Candida albicans* is responsible. Candida esophagitis is not uncommon and this may be a difficult diagnostic problem.

There are very few antibiotics which cannot be included in a list of those that may on occasion cause anorexia, nausea or vomiting. Some of the more notorious offenders include the tetracyclines, nitrofurantoin, erythromycin and the antituberculosis drugs.

Diarrhea is another frequent complication of antibiotic treatment, presumably due to the proliferation of antibiotic-resistant bacteria and fungi. Tetracycline, ampicillin, lincomycin and clindamycin are among the antibiotics most frequently associated with diarrhea ranging from nuisance diarrhea to life threatening pseudomembraneous colitis. Another interesting problem is intestinal malabsorption and steatorrhea brought about by neomycin, kanamycin or para-aminosalicylic acid.

TABLE 4
Antibiotics Causing Serious Dermatitides

Antibiotics that have caused Systemic Lupus Erythematosus	
	Isoniazid
	Griseofulvin
	Sulfonamides
	Tetracycline
	Penicillin
	Para-aminosalicylic acid
Stevens-Johnson Syndrome	
	Sulfonamides
	Penicillin
	Chloramphenicol
	Tetracycline
Toxic epidermal necrolysis	
	Sulfonamides
	Nitrofurantoin
	Penicillin
	Tetracycline
Exfoliative dermatitis	
	Sulfonamides
	Penicillin
	Tetracycline

Hepatic Complications

Hepatic dysfunction which results from antibiotics is primarily of two types: hepatocellular and hepatocanalicular (obstructive). Among the antibiotics that may be placed in the hepatocellular group are isoniazid, pyrazinamide, ethionamide, tetracycline and some of the sulfonamides. Antibiotics associated with the hepatocanalicular dysfunction are erythromycin estolate, some of the sulfonamides, and triacetyloleandomycin.

It has been observed that tetracyclines may injure the liver in patients receiving two gm. or more of the drug per day parenterally or when large quantities are administered orally. Microscopic studies of the liver reveal fine vacuoles, cytoplasmic changes, and an increase in fat in patients receiving large doses. The chances of hepatotoxicity from tetracycline administration appear to be related to daily dosage, duration of therapy, pregnancy, underlying hepatic disease, concurrent use of other hepatotoxic drugs, and impaired renal function.

Erythromycin estolate, which is the lauryl sulfate salt of erythromycin propionate, may produce hepatic dysfunction after one or two weeks of continuous therapy or after several courses of the drug. Jaundice, abnormal liver function tests, and eosinophilia may occur, but usually subside rapidly when the drug is discontinued. The effect seems to be one of intrahepatic cholestasis resulting from a form of sensitization.

Novobiocin may cause a yellow discoloration of the skin, sclera, and serum in a small percentage of patients.

Sulfonamides and amphotericin B may cause hepatic injury characterized by hepatocellular damage with toxic degeneration.

Ampicillin, oxacillin, cloxacillin, colistin, cephalothin, nalidixic acid and lincomycin may cause a transient elevation of the serum transaminases, but the exact significance is not clear.

Hematotoxicity

The blood dyscrasias that may be associated with the use of antibiotics are listed in Table 5. The most serious of these, due to their frequency of occurrence and their high mortality, are aplastic anemia and agranulocytosis.

A distinction, however, should be made between the reversible hematopoietic depression that frequently accompanies chloramphenicol

TABLE 5
Hematologic Complications of Antimicrobial Therapy

1. Anemia
   a. Aplastic anemia
   b. Hemolytic anemia
   c. Sideroblastic anemia
2. Granulocytopenia (Agranulocytosis)
3. Thrombocytopenia
4. Positive Coombs Test
5. Eosinophilia (allergic response)
6. Disorders of Hemostasis

therapy and the aplastic anemia that results from the administration of this drug (Table 6). The small risk of aplastic anemia should not contraindicate the use of chloramphenicol in life-threatening infections when there is no suitable alternative drug. One must be careful about the use of this agent, however, and repeated courses of therapy should be avoided whenever possible. Depression of bone marrow has been reported with the use of other antimicrobial agents such as various penicillins, sulfonamides, streptomycin, nitrofurantoin and amphotericin.

Agranulocytosis and Leukopenia

The sulfonamides cause agranulocytosis which is not related to dosage or blood level of the drug, and the reaction may appear suddenly or after a period of progressive neutropenia.

Chloramphenicol may at times cause selective bone marrow depression reaction producing protracted or irreversible granulocytopenia of a chronic type without affecting other marrow elements.

TABLE 6
Types of Chloramphenicol Toxicity

Reversible Bone Marrow Suppression	*Aplastic Anemia*
Common	Rare (genetic basis?)
Dose-related	Not dose-related
Reversible	Usually fatal
Occurs concurrently with therapy	Usually late clinical onset
Cellular marrow usually	Aplastic or hypoplastic marrow
Vacuolization of early erythroid cells	
Reticulocytopenia	
Elevation of serum iron	

Ampicillin, carbenicillin and other penicillins have been shown to cause leukopenia. Methicillin has been shown to cause bone marrow depression with significant neutropenia. Neutropenia has also been reported with cephalothin and cephapirin therapy. Sulfonamides, cephalosporins, penicillins, nitrofurantoin, and lincomycin have been reported to cause granulocytopenia.

Hemolytic Anemia

Sulfonamides and nitrofurantoin are antibacterial agents which cause hemolytic anemia in patients whose erythrocytes are deficient in the enzyme glucose 6-phosphate dehydrogenase. On rare occasions certain antimicrobial agents such as penicillin cause hemolysis on an immune basis. All cases of penicillin-induced hemolytic anemia have been associated with administration of high doses of the drug (20 million units a day or more).

Both cephalothin and cephaloridine have been reported to give rise to a positive, direct Coombs test. Cases of hemolysis have been described with streptomycin therapy. Anemia accompanying amphotericin B treatment has been attributed to both hemolysis and marrow depression.

Disorders of Hemostasis

Carbenicillin therapy has been reported in hemorrhagic phenomenon associated with coagulopathy, particularly in azotemic patients.

Tetracyclines have been shown to interfere with blood coagulation. Penicillins, novobiocin and the sulfonamides have been associated with a slight increase in the prothrombin time.

Summary

The most important adverse reactions of antimicrobials on major organ systems have been reviewed with the purpose of alerting the practicing physician to the dangers of antibiotic therapy. Potentially harmful effects of these drugs must never discourage a physician from their administration for any condition in which they are clearly indicated.

Look at all the Continuing Medical Education opportunities the AMA has planned for you in 1976!

More and more physicians are interested in updating their medical skills and knowledge in the interest of better patient care. And, an ever-increasing number of state medical associations, specialty societies, and other medical groups are stipulating continuing medical education as a membership requirement.

In response to these developments, the AMA has greatly expanded its C.M.E. programs.

The nine regional meetings, multidisciplinary in approach, are of interest to a variety of medical specialists and physicians in primary care. Scheduled on weekends, they make it easier and more convenient for you to continue your education. Then there are the two AMA conventions. The Annual *alone* features 53 postgraduate courses, 41 3-hour symposia, the new telecourses and many, many other features in continuing education.

All courses at regionals and conventions are accredited on a hour-for-hour basis in Category I.

The AMA's Physician's Recognition Award fulfills C.M.E. requirements of many organizations, state laws and individual physicians.

REGIONAL C.M.E. MEETINGS

Jan. 17, 18	Tulsa, Okla.
Feb. 28, 29	Denver, Colo.
March 17-20	Lexington, Ky.
April 3, 4	Indianapolis, Ind.
April 3, 4	Detroit, Mich.
May 9	Dallas, Tex.
Sept. 4, 5	Jackson Hole, Wyo.
Sept. 11, 12	Milwaukee, Wis.
Sept. 10-12	Portsmouth, N.H.

125th ANNUAL CONVENTION

June 26-30 Dallas, Tex.

30th CLINICAL CONVENTION

Dec. 4-7 Philadelphia, Pa.

For more information about meetings, courses, accommodations, tuition fees, etc., write for a free course catalogue.

Council on Scientific Assembly
American Medical Association
535 North Dearborn Street
Chicago, Illinois 60610

The President's Page

REACH OUT AND TEACH

Mrs. Robert R. Weiler, President
Woman's Auxiliary to the
West Virginia State Medical Association

Dear Doctor,

This past year has been one of thinking about legislation and its effect on our lives—both on the national and State level. As doctors' wives, we should be concerned. The Auxiliary on the State level has exerted itself to assist the West Virginia State Medical Association educate our communities on the health bills and to let the public understand the M.D.'s viewpoint. I feel that it is our responsibility to reach the people with the true facts on medical legislation. WHO ELSE is better qualified?

A new project of the Auxiliary was "Safety on the Streets." Almost all areas of our State have this problem, but little seems to be done about it. The Auxiliary has a slide program, pamphlets and, most important, a Mini-Alarm. These alarms have been cleared with the local police departments and, to date, have aided women as well as men in attacks, obscene phone calls, and breaking-and-entering. Some college campuses have used the safety program through the Auxiliary. The project has been added to the programs of community organizations and is thus growing.

It is our desire to each year reach out to the public—aid it—communicate our views and, hopefully, have the patient and doctor relationship better understood by all. The DOCTOR'S WIFE could be the main person to transfer these things.

In closing, we, the Auxiliary, thank you, the doctors, for your aid and support. It has been a wonderful year on the Auxiliary level and I feel much has been accomplished.

Sincerely,

Anita Z. Weiler

THE WEST VIRGINIA MEDICAL JOURNAL

Official Organ of the West Virginia State Medical Association

The Publication Committee is not responsible for the authenticity of opinion or statements made by authors or in communications submitted to this Journal for publication. The author or communicant shall be held entirely responsible.

Published monthly on the first day of the month, at Charleston by the West Virginia State Medical Association. Original articles are accepted on condition that they are contributed exclusively to the Journal. Advertising rates furnished on request.

Address all communications to Business Manager, West Virginia Medical Journal, Box 1031, Charleston, West Virginia 25324. Phone 346-0551.

EDITORIALS

ANTIBIOTIC USE

Since the late 1940's, when Sir Alexander Fleming, the discoverer of penicillin, predicted that the future would see the development of organisms resistant to penicillin, warnings have been issued repeatedly by research and clinical scientists concerning the development of antibiotic-resistant micro-organisms. Almost everyone agrees that there has been widespread use of antibiotics in the United States and, indeed, all over the world. Indiscriminate use of antibiotics in many countries has been the rule, notably in those areas such as Mexico where restrictive regulations regarding the sale of drugs of various kinds have been relatively lax.

In recent years, the obvious end result of this type of antibiotic use has, as predicted, been the emergence of bacteria highly resistant to certain antibiotics. Within the past three or four years, a dramatic example of this has been the appearance of a chloramphenicol-resistant typhoid organism. Some interesting and valuable research has shown additional serious or potentially serious developments, one of which has been the transfer of resistance from a resistant organism directly to a susceptible organism outside of antibiotic environment. Furthermore, the specter of a possible transfer of the resistance factor from animals to man has been speculated upon, presumably as a result of the emergence of resistant organisms in the animals whose meat is ingested by humans.

One of the interesting facts recently brought to light is the widespread over-use of antibiotics in the hospital setting. At least one investigator says that from 25 per cent to 30 per cent of hospital patients, the country over, are being given antibiotics; and that in 60 per cent to 70 per cent of these patients, no rational reason for antibiotic therapy is shown and no actual infection documented.

The giving of antibiotics to outpatients, as in the doctor's office, has possibly been on an even more grandiose scale. The pressure brought to bear on the physician by the patient or the patient's family frequently results in the prescription of antibiotics even when the physician feels that they are not necessary. In the busy practice of most doctors, the temptation to prescribe antibiotics by telephone for patients, when it is almost impossible to see the patient, may be almost overwhelming.

Today's practicing physicians will probably be well advised to restrict the use of antibiotics according to fairly well-understood and generally accepted principles. Once the decision to use antibiotics has been reached, the selection of the appropriate drug then calls for the doctor's judgment. It is now possible to get fairly accurate information as to the infecting organism, and its susceptibility to various drugs, by culture and sensitivity tests done in even small laboratories or the doctor's own incubator.

It has been shown that the selection of the narrowest-spectrum antibiotic proves to be more efficacious in the treatment of any given infection; use of unnecessarily wide-spectrum antibiotics is more likely to produce superinfection by eliminating the body's friendly flora and allowing superinfection or overgrowth of normally non-pathogenic organisms to occur. In this respect, superinfections by normally non-pathogenic organisms such as pseudomonas aeruginosa occur after the bombarding of the body's normally non-pathogenic flora by broad-spectrum drugs as well as by the immunosuppressive

agents. In this instance, the pseudomonas, which is normally non-pathogenic, is allowed to proliferate and to present in such numbers as to be overwhelming.

The use of the lowest probably-effective dose will also tend to reduce the development of antibiotic resistance in that the smaller doses reduce the incidence of superinfections. There is sometimes confusion of superinfection with colonization, the latter being the predominance of a new organism on follow-up culture in which a simple replacement of the pathogen by a non-pathogenic organism has occurred. Colonization actually presents no threat to the patient. On the other hand, colonization is sometimes confused with an actual superinfection in which the colonization or replacement of the original pathogen has actually reached infectious proportions as far as the patient is concerned.

This is an incomplete statement of the situation, but perhaps it will help to remind us all that the increased morbidity and mortality potentially attending antibiotic overuse are such that it behooves every prescribing physician to observe every scientifically known precaution in the prescribing of antibiotic drugs.

HOW POTTED CAN YOU GET?

The Beckley Post-Herald recently reprinted an article from the Chicago Daily News in which a presumably "famed psychiatrist" stated that marijuana is harmless. This is another of a seemingly endless spate of stories in publications across the country, all of which seek to convey the idea that marijuana is no more harmful than alcohol and probably less so, and that the illegal activities of persons involved in its production and marketing should be removed from the criminal category.

Each story apparently is documented as having come from a reputable source. It seems that rarely in the press has one been able to find a report of investigations pinpointing definite physiological and psychological damage from the use of marijuana or hashish. This is very interesting, especially in view of the availability of papers such as, "What the Practicing Physician Should Know About Marijuana," by Dr. Hardin B. Jones, Professor of Medical Physics and Physiology at the University of California, Berkeley; and Assistant Director of the Donner Laboratory (published in the January, 1976, issue of *Private Practice*). The author documents research-based facts which not only specify such damage resulting from the use of marijuana but does so in an accurate, scientific manner.

The obvious question is: Why is it that the news media of America eagerly publish every opinion favorable to the use of marijuana and the decriminalization of its distribution, while on the other hand studiously ignoring most evidence that the opposite is true?

This conjures up some interesting speculation regarding the self-image possessed by the news media and the reality of that image. It might even suggest the possibility of hypocrisy within the media. It might be either self-delusion or deliberate dishonesty by the media in the presentation of what is considered to be news.

The same pattern seems to be followed in many of the media's reports on the so-called "changing society" of today. Socio-economic conditions are widely discussed and analyzed by the liberal news media. And it is noteworthy that whenever news stories break or statements are made by public officials which tend to contradict the reporters' ideas, there is an immediate accompanying statement of rebuttal by the reporters, or immediate interviews with persons attempting to neutralize the anti-liberal effect of the news. An example would be the announcement by the Administration of an increase in employment, which is followed immediately by statements, arguments, or opinions purporting to show the inaccuracy or statistical unreliability of the unemployment reports.

These observations probably have been made by many of us and shrugged off as signs of the times and situations about which we can do nothing. Signs of the times they may well be, but it is hard to believe they signify societal progress or improvement.

Reduce The Dog Population, Physician Urges

A dog's bite is truly worse than his bark, says a Massachusetts physician in proposing "that the number of dogs in the United States be drastically reduced."

In an editorial in a recent issue of *Archives of Surgery*, Robert M. Goldywn, M.D., Brookline, Massachusetts, Assistant Chief Editor, points out that at least one million persons in the United States each year suffer from dog bites.

The largest number of victims are children younger than 12, says Doctor Goldywn. "Some of them will bear emotional, as well as physical, scars for many decades. A court award in dollars can never replace an intact skin and psyche."

The New England doctor proposes that "in this country the population growth of dogs be halted and reversed by appropriate birth control measures. This would still allow certain types to be bred carefully for their worthy qualities."

GENERAL NEWS

Scientific Program Completed For Annual Meeting

Plans have been completed for the three general scientific sessions to be held during the 109th Annual Meeting of the West Virginia State Medical Association, which will be held August 18-21 at The Greenbrier in White Sulphur Springs.

The scientific program was completed with the announcement of the final two speakers, Drs. Eugene J. Linberg of Naples, Florida, and Philip R. Nader of Galveston, Texas.

Philip R. Nader, M. D.

Dr. Robert D. Hess of Bridgeport, Chairman of the Program Committee, said that the general scientific sessions again will be held during the morning hours of the convention and that a majority of the sections and affiliated societies will meet at the breakfast hour to enable those in attendance to relax and enjoy the recreational facilities available at the resort hotel during the afternoon hours.

Doctor Linberg, a thoracic surgeon, will be the third of three speakers in a "Symposium on Pulmonary Diseases" comprising the first general scientific session on Thursday morning, August 19; and Doctor Nader, Associate Professor of Pediatrics and Psychiatry at the University of Texas Medical Branch, will complete the program of three speakers for the second general session on Friday morning.

Doctcor Linberg's topic will be "Surgical Physiology in Pulmonary Disesase," while Doctor Nader will lecture on "The Physician's Role in Learning Problems and School Phobia."

Eugene J. Linberg, M. D.

A native of Passaic, New Jersey, Doctor Linberg was graduated from Duke University and received his M. D. degree in 1948 from that institution's School of Medicine. He served an internship and residency in general and thoracic surgery at Duke Hospital, with a two-year interruption for service with the U. S. Army Medical Corps. He was an Instructor in Surgery at Duke University in 1955-56, and then went to Salisbury, Maryland, where he was in the private practice of general and thoracic surgery until 1958.

In that year, Doctor Linberg joined the staff of the University of Maryland School of Medicine, where he served in a variety of positions, including Professor of Thoracic Surgery and Assistant Dean. While in Maryland, he also was Assistant Coordinator, University of Maryland, Regional Medical Program; and Consultant in Thoracic Surgery for Maryland state tuberculosis hospitals. He went to Florida in 1969.

Doctor Linberg is a former Director of Medical Education at Tampa (Fla.) General Hospital and a former Clinical Professor of Surgery at the University of South Florida School of Medicine. He is an attending surgeon at Naples Community Hospital.

He is certified by the American Board of Surgery and the Board of Thoracic Surgery, and is a Fellow of the American College of Surgeons. He is also a member of the American College of Chest Physicians, the American Association for Thoracic Surgery, the Southern Surgical and Thoracic Surgical associations; and the American Thoracic Society.

Doctor Linberg was President of the Florida Thoracic Society in 1975-76, and currently is a Director of the Florida Society of Thoracic and Cardiovascular Surgeons. He is the author or co-author of a number of scientific articles.

Philip R. Nader, M. D.

Doctor Nader also is Director of School Health Programs and Co-Director of the Child Development Division at the University of Texas Medical Branch in Galveston. For the past two years, he has been Project Director of a research and training demonstration in comprehensive school health.

He is a Diplomate of the American Board of Pediatrics, a Fellow of the American Academy of Pediatrics, a Fellow of the Royal Society of Health, and a Fellow of the American School Health Association.

A native of Dayton, Ohio, Doctor Nader was graduated from Wooster (Ohio) College and received his M. D. degree in 1962 from the University of Rochester (N. Y.) School of Medicine. He served an internship in pediatrics and medicine at Strong

Memorial Hospital in Rochester and a residency in pediatrics at the University of California School of Medicine in San Francisco.

After completing his residency, he was Clinical Instructor in the Department of Pediatrics at Emory University School of Medicine in Atlanta from 1965 to 1967. He then returned to the University of Rochester for a fellowship in behavioral pediatrics in 1967-68, and remained at the university in several teaching assignments before going to Texas in 1973.

Doctor Nader is a member of the Governing Council of the American School Health Association, and is Chairman of that group's Study Committee on Special Health Problems of Children. He also is a member of the Society for Epidemiologic Research and the Society for Pediatric Research. He is the author or co-author of a number of scientific articles and abstracts.

Thursday Morning

Speaking in addition to Doctor Linberg during the "Symposium on Pulmonary Diseases" Thursday morning will be Dr. Richard B. Hornick, Professor and Director, Division of Infectious Diseases, University of Maryland School of Medicine, whose subject will be "Viral Infections of the Lung;" and Dr. Paul M. Stevens, Professor of Medicine and Chief, Pulmonary Section, Baylor College of Medicine, Houston, who will speak on "Recent Advances in the Diagnosis and Therapy of Chronic Reversible Airway Obstruction."

Friday Morning

Joining Doctor Nader Friday morning will be Drs. William A. Neal, Assistant Professor of Pediatrics, West Virginia University School of Medicine; and Thomas H. Joyce III, Associate Professor of Anaesthesia and Obstetrics and Gynecology at the University of Cincinnati Medical Center. Doctor Joyce will discuss "A Broad Review of Obstetrical Anaesthesia," and Doctor Neal's topic will be "Regionalization of Perinatal Care in West Virginia."

Saturday Morning

The speakers and their topics for the Saturday morning program will be:

"Poisonings—Some New Concepts and Some Old Ones Revisited" — Richard W. Moriarty, M. D., Assistant Professor of Pediatrics, University of Pittsburgh School of Medicine; and Director, National Poison Center Network, Children's Hospital of Pittsburgh; and "Motivation and Preparation for Becoming a Teacher"—Thomas L. Stern, M. D., Director, Division of Education, American Academy of Family Physicians, Kansas City, Missouri.

Dr. Richard E. Flood of Weirton, who also will moderate the Saturday morning session, will coordinate a practical discussion of "Joint Practice of Nurses and Physicians As an Approach to Meeting Growing Primary Care Demands" during that session.

Business, Other Meetings

The Pre-Convention Meeting of the Council will be held on Wednesday morning, August 18, with the first session of the House of Delegates following that afternoon.

Dr. Richard E. Palmer of Alexandria, Virginia, who will be installed later this month as President of the American Medical Association during the Annual Meeting in Dallas, will be the principal speaker at the first session of the House of Delegates.

Dr. Jack Leckie of Huntington, President of the State Medical Association, will deliver his Presidential Address at the second and final session of the House of Delegates on Saturday afternoon, August 21.

Current indications point to an increased number of sections and societies affiliated with the State Medical Association which will be holding scientific and business meetings at breakfast, and other, sessions.

Reservations Urged

Physicians planning to attend the meeting are urged to make reservations at The Greenbrier as soon as possible in order to be assured of room accommodations at the hotel. It is anticipated that more than 600 physicians, their wives and guests will be in attendance.

Additional information concerning the 109th Annual Meeting will be published in the July and August issues of *The Journal.*

CME Program At CAMC Approved By State Medical Association

The continuing medical education program of the Charleston Area Medical Center has been accredited by the State Medical Association, through its Committee on Medical Education and Hospitals, effective March 23.

The CME program was granted a full, three-year accreditation. The program previously had been given a one-year provisional accreditation in March of 1975.

The CME program of the Veterans Administration Center in Martinsburg will be re-surveyed on June 15. That program was granted a two-year provisional accreditation in July of 1974.

Scheduled to be surveyed in the near future are Fairmont Clinic and Herbert J. Thomas Memorial Hospital in South Charleston.

For additional information on recent and past surveys, see the May issue of *The Journal.*

Hospitals and organizations interested in seeking CME accreditation may contact the headquarters of the State Medical Association.

Continuing Education Activities

Here are the continuing medical education activities listed primarily by the West Virginia University School of Medicine for part of 1976, as compiled by Dr. N. LeRoy Lapp, Assistant Dean for Continuing Education. The schedule is presented as a convenience for physicians in planning their continuing education program. (Other national, state and district medical meetings are listed in the *Medical Meetings* Department of *The Journal.*)

The program is tentative and subject to change. It also should be noted that weekly conferences are held on both the Morgantown and Charleston campuses. Further information about these may be obtained from: Division of Continuing Education, WVU Medical Center, P. O. Box 2867, Charleston 25330; or, Office of Continuing Medical Education, WVU Medical Center, Morgantown 26506.

June 4	Second Annual ENT Teaching Day	Morgantown
June 5	Third Annual Surgery Conference	Charleston
June 7	Controversies in Surgery	Charleston
June 26	Anesthesia Update 1976	Morgantown
June 13-18	School of Alcohol and Drug Abuse Studies	Morgantown
Summer of 1976	Extension Programs in Psychiatry	

Symposium On Geriatric Patient In South Charleston, June 23

A symposium on "The Socio-Medical Management of the Geriatric Patient," sponsored by the American Geriatrics Society, will be held on June 23 at the Ramada Inn in South Charleston. The symposium will be co-sponsored by the Charleston Division of the West Virginia University Medical Center, and the Charleston Area Medical Center.

The program will begin with registration at 12:45 P. M., followed by a welcome from Dr. Joseph T. Skaggs of Charleston, who will serve as Chairperson.

Two films will be shown, followed by remarks by the guest speaker, Dr. George M. Simpson, Principal in Research, Rockland State Hospital, Orangeburg, New York; and Associate Director of Psychiatry at Bergen Pine's County Hospital in Paramus, New Jersey.

The first film will be a preview of a television documentary, "What Do You Want to Be When You Grow Old?" (to be shown over the ABC Television network in the Huntington-Charleston area during the week of June 28 on a date to be announced). Doctor Simpson, who also is Visiting Professor at the Meninger Foundation in Topeka, Kansas, and a member of the Advisory Commission of the Food and Drug Administration, will follow the viewing with remarks on "Overview of Socio/Medical Aspects for the Elderly."

Doctor Simpson will discuss "Mental, Emotional and Behavioral Aspects of the Elderly" following the second film, entitled "Treatment of Psychosis in the Elderly."

Question-and-answer periods are scheduled.

Appearing in the first film are two medical authorities in the field of gerontology: Dr. Ewald W. Busse, President of the American Geriatrics Society; and Dr. Robert N. Butler, the first Director of the new National Institute of Aging, and author of *Why Survive?—Growing Old in America.*

A treatment program designed with an attitude of concern, simple schedules that involve patients in various activities, and the judicious use of psychoactive medication to help elderly psychotic patients return to a more normal way of life, is described in the second film. Patients are shown before, during and after treatment in this film.

The symposium, which is supported by a grant from Roerig, a division of Pfizer Pharmaceuticals, has been endorsed by the Cabell, Kanawha and Raleigh county medical societies. It is acceptable for four credit hours in Category 1 of the Physician's Recognition Award of the American Medical Association.

Buckhannon Chamber Honors Dr. Jacob C. Huffman

Dr. Jacob C. Huffman, the senior member of Upshur County's corps of active family physicians, recently was named by the Buckhannon Chamber of Commerce as its Citizen of the Year.

The award, which was announced at the Chamber's annual membership dinner, highlighted an evening which also recognized the other physicians, hospitals and the emergency ambulance squad which serve the county.

Drs. Basil L. Page and Wease L. Ashworth of Buckhannon, retired surgeons, were particularly honored.

Doctor Huffman is Past President of the State Medical Association, and Mrs. Huffman served as President of the State auxiliary during the same year (1959-60). A native of Sutton, he began practice in Buckhannon in 1939.

He has served as Chief of Staff at St. Joseph's Hospital in Buckhannon on several occasions, and serves as county health officer. He is a Past President of Rotary, a member of the Masons, and is a trustee of the First United Methodist Church.

Kno-Koma Diabetic Camp Session August 1-14

Camp Kno-Koma for diabetic children will begin its 27th year of operation on August 1. Every diabetic boy or girl in West Virginia, age 7 to 15, is eligible for the camp. The 1976 camp session will continue through August 14 at Camp Galahad, located on Blue Creek near Clendenin.

The camp, which has been a success in providing an educational and enjoyable summer experience for diabetic youngsters, is sponsored by the West Virginia Diabetes Association.

Dr. George P. Heffner of Charleston was the chief catalyst in forming Camp Kno-Koma, in 1950, in the interest of promoting the welfare and normalcy of diabetic children. Originally, the camp was on a one-week basis and utilized the facilities of the Union Carbide Camp in Kanawha County. It later moved to Camp Caesar in Webster County and, in 1957, the present camp site of 10 acres was acquired. In the 26 years that Camp Kno-Koma has served the State, the total enrollment has been 1,573 campers, representing more than 550 different diabetic children.

Campers learn the food exchange list to insure proper diet, the importance of regular hours, urine specimen checks, administration of insulin, and how to work and play and engage in strenuous activity without fear. They go home better prepared for what's ahead and are able to show their parents that they are normal.

The camp medical staff, under the direction of Dr. W. Gene Klingberg of the West Virginia University Medical School, is trained and experienced in the care of juvenile diabetes.

The Camp Kno-Koma Committee especially is interested in having as campers economically deprived children whose medical care may be minimal and who, therefore, would benefit most from the camp experience.

Physicians who have any financially needy diabetic children as patients, or who know of particular cases in their community, are requested to contact the camp staff, because financial aid is available.

For further information, contract: Camp Kno-Koma, P. O. Box 8184, South Charleston 25303 (744-5845).

Courses In Ultrasound At Bowman Gray

A series of three 10-week postgraduate courses in Sonic Medicine at Bowman Gray School of Medicine in Winston-Salem, North Carolina, will be offered on the following dates: September 27-December 3, 1976; January 10-March 18, 1977; and April 11-June 17, 1977. These courses are designed to provide background, techniques, experience and knowledge so that the individual will be able to set up both an ultrasonic laboratory and a training program.

Youngsters watch as a lesson in measuring insulin is conducted at Camp Kno-Koma for diabetic children. Funds are available for financially needy diabetic campers, and physicians are invited to make such referrals for this summer's camp session.

81 Graduated From WVU School Of Medicine In May

Spending their first postgraduate year in West Virginia will be 37 members of the West Virginia University School of Medicine's Class of 1976.

Of the 72 men and nine women who received degrees in medicine in May at WVU, 69 participated in the National Intern and Resident Matching Program's computerized system that pairs senior medical students and hospitals according to the choices of both. Most of those who did not take part in the program have military or other scholarship obligations that determine their destinations after graduation.

Among those who will be staying in the State, 22 will be at University Hospital, 10 at Charleston Area Medical Center, three at the Kanawha Valley Family Practice Program, and one each at Ohio Valley Medical Center and Wheeling Hospital.

Among the types of postgraduate programs chosen and the number in each are: medicine (14), family practice (12), psychiatry and surgery (11 each), obstetrics/gynecology and pediatrics (7 each), general flexible (6), radiology (4), anesthesiology (3), orthopedic surgery (2), and neurology and ophthalmology (1 each). Two seniors have not decided upon locations.

Members of the Class of 1976, their home towns, and where they will be after July 1 are:

Nick G. Anas, Weirton, Children's Medical Center, Dallas, Tex.; James G. Arbogast, Stratford, Conn., WVU Department of Family Practice; Ronald L. Bell, Jr., Moundsville, Charlotte (N. C.) Memorial Hospital; George R. Beneke, Wheeling, Norfolk (Va.) General Hospital; Marcia Ann Bohn, Princeton, Charleston Area Medical Center; William P. Brown, Morgantown, WVU Department of Anesthesiology; William C. Callihan II, Johnstown, Pa., Children's Hospital of Akron, Ohio; Diane J. Camp, Roch, Pa., University of Minnesota Hospitals, Minneapolis.

Byron D. Campbell, Bridgeport, Pensacola (Fla.) Education Program; Edgar D. Canada, Beckley, San Diego (Calif.) Naval Hospital; Linda G. Carr, Huntington, Vanderbilt University Hospital, Nashville, Tenn.; Nicholas Cassis, South Charleston, WVU Department of Internal Medicine; John N. Casto, Great Cacapon, Kanawha Valley Family Practice Program; Robert A. Caveney, Wheeling, Norfolk (Va.) Hospital; Paul L. Clausell, Weirton, WVU Department of Behavioral Medicine and Psychiatry; Daniel M. Conforti, Morgantown, Ohio State University Children's Hospital, Columbus; Frederick A. Conley II, Kingwood, WVU Department of Family Practice.

Carmen J. Corrall II, Davis, WVU Department of Pediatrics; Glenn Crotty, Jr., Mullens, Charleston Area Medical Center; Timothy G. DeEulis, Huntington, Riverside Methodist Hospital, Columbus, Ohio; Robert S. DiBacco, Thomas, Hartford (Conn.) Hospital; Thomas A. Dickie, Wheeling, WVU Department of Surgery; Jerry W. Edens, Elkview, Kanawha Valley Family Practice Program; William E. Evans, Jr., Ceredo, Charleston Area Medical Center; John C. Fetzer, Rolling Meadows, Ill., Boston (Mass.) University School of Medicine; Harry D. Fortner, Stollings, Kanawha Valley Family Practice Program.

Roger L. Frome, Clarksburg, WVU Department of Radiology; Paul H. Fulcher, Jr., Charleston, Charleston Area Medical Center; Glen R. Gabler, Heber City, Utah, San Diego (Calif.) Naval Regional Medical Center; Joseph P. Goldston, Mt. Gilead, N. C., University of Kentucky Medical Center, Lexington; Vincent A. Griffith, Jr., Wheeling, Thomas Jefferson University Hospital, Philadelphia; Robert A. Gustafson, Keyser, WVU Department of Surgery; Timothy G. Harper, South Charleston, Charleston Area Medical Center; Patricia J. Harrison, Summersville, Wheeling Hospital; Mary H. Hoback, Huntington, WVU Department of Behavioral Medicine and Psychiatry.

Brett P. Hunter, Weirton, Milwaukee (Wisc.) County Hospital; Robert M. Hutton, Clarksburg, WVU Department of Behavioral Medicine and Psychiatry; Jeffrey M. Jones, Morgantown, Riverside Hospital, Newport News, Va.; Martin Z. Kanner, Charleston, Sinai Hospital, Baltimore, Md.; Steven R. Kessel, Ripley, Charleston Area Medical Center; Ray N. Ketcham, South Charleston, Maine Medical Center, Portland; Carl J. Kite, Wheeling, Roanoke (Va.) Memorial Hospital; Donald W. Kress, Wheeling, Milton S. Hershey Medical Center, Hershey, Pa.; Danny J. Lancaster, Lewisburg, University of Texas Medical Branch Hospital, Galveston.

John M. Lawson, Parkersburg, Akron (Ohio) City Hospital; Dennis S. Layton, Petersburg, Charleston Area Medical Center; Henry Levenson, Charleston, Los Angeles County Harbour General Hospital, Torrance, Calif.; Paul T. Livengood, Keyser, WVU Department of Family Practice; Malcolm B. Louden, Jr., Parkersburg, WVU Department of Medicine; Oliver H. Loyd, Victoria, Tex., location undecided; Michael Lupinetti, Wellsburg, Magee Women's Hospital, University of Pittsburgh, Pa.; Larry L. Mackall, Clarksburg, WVU Department of Anesthesiology; Gary D. Marano, Clarksburg, WVU Department of Neurology.

Ralph W. McCue, Jr., Bluefield, Akron (Ohio) General Hospital; Steven C. Miller, Morgantown, University of South Carolina Medical Center Hospital, Charleston; Gregory W. Mitchell, Charleston, location undecided; Rocco A. Morabito, Huntington, WVU Department of Surgery; John E. Moran, Jr., Schenectady, N. Y., Fairview General Hospital, Cleveland, Ohio; Raymond F. Morgan, Pittsburgh, Pa., Johns Hopkins University Hospital, Baltimore, Md.; Thomas E. Myers, South Charleston, Oakland (Calif.) Naval Regional Medical Center; Paul E. Nefflen, Elkins, Augusta (Ga.) Department of Family Practice; Paul M. Nerz, White Sulphur Springs, Alachur General Hospital, Gainesville, Fla.

William L. Noble, Dunbar, WVU Department of Radiology; Ross M. Patton, Huntington, Mount Carmel Hospital, Columbus, Ohio; Thomas W. Poland, Tunnelton, WVU Department of Anesthesiology; Roxann L. Powers, Ridgeley, WVU Department of Internal Medicine; Gina M. Puzzuoli, Morgantown, Charleston Area Medical Center; Charles W. Reyes, Parkersburg, Charleston Area Medical Center; Lawrence M. Ronning II, Vienna, Riverside Methodist Hospital, Columbus, Ohio; Howard L. Shackelford, Jr., Wheeling, Ohio Valley Medical Center; David C. Shamblin, Nitro, Portsmouth (Va.) Naval Hospital.

Mary C. Shemo, Silver Springs, Md., WVU Department of Behavioral Medicine and Psychiatry; Margaret Simpson, Las Cruces, N. M., Hennepin County General Hospital, Minneapolis, Minn.; Wilson P. Smith, Jr., Huntington, University of Alabama Medical Center, Birmingham; Thomas R. Stealey, Morgantown, University of Minnesota Hospital, Minneapolis; Keith D. Stottlemyer, Sharpsville, Pa., David Grant Medical Center, Travis AFB, Fairfield, Calif.; William D. Strauch, Wheeling, WVU Division of Ophthalmology; Andrew Summers, Glenville, WVU Department of Surgery; Gary M. Townsend, Martinsburg, Charleston Area Medical Center; Charles T. Tweel, Jr., Huntington, Grant Hospital, Columbus, Ohio; and Samuel R. Whitaker, Parkersburg, Roanoke (Va.) Memorial Hospital.

Dr. Morgan Honored As Author Of Lung Disease Text

A Morgantown physician recently was honored by the American Occupational Medical Association as the senior author of the textbook, "Occupational Lung Diseases."

Dr. William Keith C. Morgan, Professor of Medicine and Chief, Division of Pulmonary Diseases, at West Virginia University Medical Center, was presented the Adolph G. Kammer Merit in Authorship Award at the association's annual meeting in Cincinnati.

The textbook Doctor Morgan co-authored was judged to be the best publication in the field of occupational medicine from September, 1974, to August, 1975.

Diplomates, Fellow Named By Specialty Groups

Drs. David A. Ames of Beckley and George P. Hlusko, Jr., of Charleston have been named Diplomates of the American Board of Psychiatry and Neurology, Inc. They successfully completed the examination given by the board in Los Angeles in April.

Dr. Dev R. Rellan of Huntington has been named a Fellow of the American College of Physicians. He was one of 314 new Fellows elected at a recent meeting of the College's Board of Regents in Philadelphia.

State Physicians To Attend AMA Convention In Dallas

A number of West Virginia physicians will be among some 9,000 physicians attending the 125th Annual Convention of the American Medical Association, June 26-July 1, in Dallas.

The West Virginia State Medical Association's two Delegates to the AMA House of Delegates are Drs. Richard E. Flood of Weirton and Frank J. Holroyd of Princeton, with Drs. George R. Callender, Jr., of Charleston, and Harry S. Weeks, Jr., of Wheeling, as Alternate Delegates.

Richard E. Flood, M. D.

Frank J. Holroyd, M. D.

Doctor Holroyd will serve on Reference Committee A of the House of Delegates, which deals with the subjects of insurance and medical service. This committee traditionally has one of the convention's heaviest work loads in the consideration of resolutions, reports and various other materials.

The House of Delegates will convene in the Fairmont Hotel on Sunday, June 27. Hearings before the reference committees will be held on Monday, June 28.

The postgraduate courses, scientific program and scientific exhibits will open on Saturday, June 26, in the Dallas Convention Center.

Dr. Stephen D. Ward of Wheeling is a member of the AMA's Board of Trustees' Council on Legislation, and Dr. Mildred Mitchell-Bateman, Director of the State Department of Mental Health, serves as Consultant for the Board's Council on Mental Health.

Dr. Carl B. Hall of Charleston, President of the American Academy of Family Physicians, will present welcoming remarks at a session of the Section on Family and General Practice Tuesday morning, June 29.

Dr. J. Elliott Blaydes of Bluefield will present a paper on "The Physical and Biologic Basis for Suture Selection in Cataract Surgery" at a meeting of the Section on Ophthalmology Tuesday morning.

More than 50 postgraduate courses covering the complete range of medical practice will be offered. General lecture sessions will cover topics such as the Federal thrust in primary health care, influence

George R. Callender, Jr. M. D.

Harry S. Weeks, Jr., M. D.

on the practice of medicine of government regulation of drugs, and contemporary nutritional therapy. Special topics will include sessions on pets and human disease, cystic fibrosis, and on prescribing of antibiotics in everyday practice.

The 18th National Conference on Medical Aspects of Sports will be held on the opening day of the convention, June 26.

The 53rd annual convention of the AMA Auxiliary will be held simultaneously with the general convention, with the Auxiliary headquarters to be the Statler Hilton Hotel.

The 32nd annual meeting of the "Forum For Medical Affairs," sponsored by The Conference of Presidents and Other Officers of State Medical Associations, will be held in conjunction with the convention on June 27 at the Fairmont Hotel.

The forum topic will be "Federal Bureaucracy and Regulation—Impact Upon the Physician and His Patients," with the speakers to include Dr. Harry P. Cain, Acting Director of the Bureau of Health Planning and Resource Development, HEW, Washington, D. C.; Congressman Jim Wright (12th District, Texas), a member of the House committees on Budget; Government Operations; and Public Works and Transportation; and Irvine H. Page, M. D., Editor of *Modern Medicine*.

The American Medical Golf Convention will hold its 50th annual golf tournament June 28 at the Brook Haven Country Club in Dallas. The American Art Association will sponsor the annual exhibition of paintings, sculpture and other art works by physicians at the Convention Center. Awards will be presented for outstanding work in the arts.

The complete program for the convention was published in the April 19 issue of the Journal of the AMA.

WVU Medical Scholarships Delayed Until New Class Filled

The annual awarding of scholarships by the State Medical Association, through its Committee on Medical Scholarships, has been delayed until the new class of entering students at the West Virginia University School of Medicine has been completed.

The committee convened in Morgantown on May 1 and 2 to interview applicants and award the four WVU scholarships provided annually by the Medical Association, but were informed by WVU officials that approximately 20 places in the entering class remained to be filled.

The committee interviewed 18 applicants during the May 1-2 meeting. When the new class is completed, those among the 20 remaining students to be accepted by the medical school who apply for the scholarships also will be interviewed and considered by the committee. The four recipients for 1976 will be announced following the second meeting of the committee.

Recipients of the scholarships receive $1,000 for each of the four years while enrolled in the WVU School of Medicine. Under the terms of the scholarship, recipients must agree to practice in West Virginia for four years following graduation, completion of postgraduate training, and military obligations.

Dr. Peter A. Haley (left) of Charleston was presented the "Mr. Doc" plaque during the 24th Annual Assembly of the West Virginia Chapter, American Academy of Family Physicians, held in Charleston in April. Doctor Haley is Director of Health Services for Kanawha County Schools. The award was presented to him in recognition of his contribution to the medical profession and his community services by Dr. John W. Traubert (above), Immediate Past President of the West Virginia Chapter.

Dr. Ross E. Newman Named Chairman Of Regional Health Council

Ross E. Newman, M. D., of Mullens, has been named Chairman of the Southern West Virginia Regional Health Council following the death of Dr. Daniel Hale of Princeton, who had served as Chairman for more than eight years. Doctor Newman previously had served as Vice Chairman of the organization, which conducts a primary health care program in nine southern counties of West Virginia.

Ross E. Newman, M. D.

Doctor Newman is Chief of Surgical Services and co-owner of Wyoming General Hospital at Mullens. A native of Hillsville, Virginia, he took his premedical education at the University of Virginia and Randolph-Macon College in Ashland, Virginia. He received his M. B. and M. D. degrees from Louisiana State University Medical Center in New Orleans, and served his internship and residency at Charity Hospital there.

Doctor Newman is a member of the American College of Surgeons, the International College of Surgeons, the American Society of Abdominal Surgeons, and the Southeastern Surgical Congress. He also is a member of the American Federation of State Medical Licensing Boards and the Medical Licensing Board of West Virginia, the American Medical Association, the West Virginia State Medical Association, and the Wyoming County Medical Society.

Expense Of Paper Work Cited During AAFP Meeting

Physicians are spending $1 for every $6 received in "paper shuffling," according to Dr. William D. Crigger of South Charleston. During a report to the 24th annual scientific assembly of the West Virginia Chapter, American Academy of Family Physicians, Doctor Crigger, immediate past Chairman of the Chapter's Board of Directors, said that the $1 of expense for every $6 received was represented in preparing patient claims, insurance reports, and other forms necessary in Medicare, Medicaid and compensation cases.

"It costs as much as $1.50 for every $5 in certain insurance cases to handle the paper work," Doctor Crigger declared at the April meeting in Charleston. In Medicaid and Medicare cases, almost 10 per cent of what the doctor receives goes for office work, he added.

Necessary reporting in third-party payments for health care services not only means extra office help, but also extra time on the doctor's part to make corroborating statements, the former Chapter President said. "Then, there is the extra waiting period before the bill is paid," he commented. He added that the "paper shuffling is adding considerably to the bill for health care."

Cost of office management was one of several subjects discussed at this year's three-day meeting.

New officers were installed in April during the 24th annual scientific assembly of the West Virginia Chapter, American Academy of Family Physicians, in Charleston. From left, are Drs. Asel P. Hatfield of Harrisville, Vice President; John W. Traubert, Morgantown, Immediate Past President and now Chairman of the Board of Directors; F. M. Townsend, Petersburg, Treasurer; Ray M. Kessel, Logan, President; Marshall J. Carper, Charleston, President-Elect; and Thomas P. Long, Man, Secretary. The new officers were installed by Dr. Carl B. Hall of Charleston, President of the American Academy of Family Physicians.

State AAFP Chapter Responds To Immunization Call

West Virginia family physicians have responded quickly to the call of Dr. Carl B. Hall of Charleston to help organize mass clinics to administer the swine flu vaccine against next fall's possible outbreak of the virulent form of influenza.

Doctor Hall, President of the American Academy of Family Physicians, issued the call at the opening of the 24th annual scientific assembly of the West Virginia Chapter, AAFP, in Charleston, April 9-11. The members of the Chapter voted unanimously to join colleagues in other medical organizations for the national inoculation campaign.

Dr. Kessel Installed As President

Doctor Hall was the guest of honor during the three-day meeting which attracted some 200 family physicians and visitors from six states, and installed new officers of the West Virginia Chapter during the annual banquet. Dr. Ray M. Kessel of Logan was installed as President, succeeding Dr. John W. Traubert of Morgantown. Other 1976-77 officers include Drs. Marshall J. Carper of Charleston, President-Elect; Asel P. Hatfield of Harrisville, Vice President; Thomas P. Long of Man, Secretary; and M. F. Townsend of Petersburg, Treasurer.

President Gerald R. Ford started the flu inoculation campaign this spring in Washington when he proposed a $135 million appropriation to obtain the vaccine. Congress, Doctor Hall said, "acted most expeditiously on the request." The West Virginia Chapter will seek the support of the West Virginia State Medical Association, registered and practical nurses organizations and others in the immunization program.

Some 16 papers were presented during the scientific program. The speakers and their topics were previously reported in *The Journal.*

Other Officers

Re-elected were Drs. Joseph A. Smith of Dunbar and Del Roy R. Davis of Kingwood as AAFP Delegates; and Richard E. Flood of Weirton and L. Dale Simmons of Clarksburg as Alternate Delegates.

Elected to replace Doctor Townsend on the Board of Directors was Dr. Dewey F. Bensenhaver of Petersburg, who will represent District III. Reelected to the Board were Drs. Thomas L. Ritz, Wheeling, District I; John L. Fullmer, Morgantown, District II; and William S. Sadler, Barboursville, District VIII.

Other members of the Board are Drs. A. P. Brooks, Parkersburg, District IV; Robert D. Hess, Bridgeport, District V; I. M. Kruger, Logan, District VI; and George W. Hogshead, Nitro, District VII.

Legislature Fails To Enact Malpractice Legislation

The Legislature ended its regular 1976 session on May 15 without enacting malpractice insurance legislation. This and other political and legislative matters received long and perhaps unprecedented attention at a May 16 meeting of the Medical Association Council, with steps already under way to intensify efforts in several directions.

The session could not be written off as a total loss with regard to malpractice legislation. Bills which can be assured of support by all interested parties in the health care, insurance and other fields were developed, and will serve as an established base for continued work by the Medical Association, in its own interests and in necessary cooperation with others.

Apparently certain that Gov. Arch A. Moore, Jr., will call them back in special session in June, the lawmakers also did not act on a substantial number of supplemental appropriation bills. These included several involving the medical and overall health care field, including fund requests for the State Health Department's Early Childhood Development Program; emergency medical services, and the medical program operated by the Department of Welfare.

The Senate's limited action included confirmation of some additional executive nominations, including that of Dr. F. Lloyd Blair of Parkersburg to a new term, to end June 30, 1981, on the West Virginia Board of Regents.

Action taken at the May 16 Council meeting will be reported in the July issue of the *Medical Journal.*

Doctor Shiels Elected President Of State Pathologists

The West Virginia Association of Pathologists, at its annual meeting May 1 and 2 in Morgantown, elected Dr. John P. Sheils of Huntington as its President, to succeed Dr. Vicente Anido of Morgantown.

The association named Dr. Karl L. Klapproth of Charleston as President Elect, and elected Dr. Cordell A. de la Pena of Clarksburg as Secretary-Treasurer.

The association also voted to hold a luncheon meeting on Saturday, August 21, during the Annual Meeting of the West Virginia State Medical Association at The Greenbrier in White Sulphur Springs.

Doctor Mallamo Appointed To Association Council

Dr. Jack Leckie of Huntington, the State Medical Association's President, has appointed Dr. Joseph T. Mallamo, Fairmont surgeon, to the Association Council for the unexpired term of Dr. Robert G. Janes, also of Fairmont.

Doctor Janes submitted his resignation earlier this year in the face of pressure from his professional activities, and the Marion County Medical Society nominated Doctor Mallamo to succeed him for the district embracing Wetzel and Marion counties.

Doctor Mallamo will serve until the Association's annual meeting in August, when the House of Delegates will elect Councilors for new two-year terms in this and other districts.

Dr. Bateman On AMA Committee On Medical Discipline

Dr. Mildred Mitchell-Bateman, Director of the State Department of Mental Health, is a member of a new Ad Hoc Committee on Medical Discipline appointed recently by the American Medical Association.

The committee has been studying the medical profession's self-regulating and self-policing mechanisms, and will present a preliminary report on its findings to the AMA House of Delegates at the annual convention this month in Dallas. A final report will be made at the clinical convention in December in Philadelphia.

After studying the disciplinary mechanisms of medical associations and determining the effectiveness of medical discipline, the committee will recommend appropriate modifications in medical self-regulation and appropriate legislation and governmental regulations; recommend improvements in state legislation and licensure board regulations; review the procedures by which hospitals limit privileges within the individual physician's competence, and study the relationship between medical discipline and malpractice claims.

Named by the AMA Board of Trustees as Chairman of the new committee was Charles Smeltzer, M.D., of Knoxville, Tennessee. Doctor Smeltzer is a former Chairman of the AMA Judicial Council and has long been working with problems of medical ethics and medical discipline.

The best interests of the public and the medical profession are served by maintaining the most effective disciplinary measures possible, said the AMA in creating the committee.

Since the 1969 report of the Medical Disciplinary Committee, the profession has maintained its activities in medical discipline and is vitally interested in determining if present day medical discipline is effective and efficient and if there is a relationship between the medical disciplinary system and the incidence and cost of malpractice claims, the AMA said.

Medical discipline, said the AMA, is a two-tier system consisting of (1) professional self-regulation through the activities of medical associations, American Boards, and hospital medical staffs and committees, and (2) government regulations through medical licensure boards.

Medical Meetings

The following is a partial list of national, state and district medical meetings scheduled in the coming months.

1976

June 9-12—Aspen Lung Conference, Aspen, Colo.

June 14-16—Am. Neurological Assn., San Francisco.

June 17—Tygart's Valley Postgraduate Course, Elkins.

June 17-20—Pa. Allergy Assn., Hershey.

June 26—W. Va. State Society of Anesthesiologists, Morgantown.

June 26-July 1—AMA Annual Meeting, Dallas.

June 27-28—Am. College of Preventive Med., Dallas.

Aug. 1-7—Am. Institute of Uutrasound in Medicine, San Francisco.

Aug. 4-6—Am. Academy of Clinical Toxicology, Seattle.

Aug. 17-20—International Society for Experimental Hematology, Washington, D.C.

Aug. 18-21—109th Annual Meeting, W. Va. State Medical Assn., White Sulphur Springs.

Sept. 9-11—Am. Assn. of Obstetricians & Gynecologists, Hot Springs, Va.

Sept. 15-17—Pa. Medical Society, Philadelphia.

Sept. 16-18—Medical & Chirurgical Faculty of the State of Md., Annapolis.

Sept. 20-23—AAFP, Boston.

Sept. 26-30—Kentucky Med. Assn., Louisville.

Oct. 6-9—Maryland Medical Staff Conference, White Sulphur Springs.

Oct. 9-14—Indiana State Medical Assn., Indianapolis.

Oct. 11-15—ACS, Chicago.

Oct. 16-17—Am. College of International Physicians, Inc., Chicago.

Oct. 24-26—Medical Society of the District of Columbia, White Sulphur Springs.

Nov. 4-7—Medical Society of Virginia, Williamsburg.

Nov. 7-10—Southern Medical Assn., New Orleans.

Dec. 4-8—AMA Clinical, Philadelphia.

1977

Jan. 28-30—Tenth Mid-Winter Clinical Conference, Charleston.

The West Virginia Medical Journal

Vol. 72, No. 7 July, 1976

Tympanometry And The Physician

Robert C. Cody, M. A.

During the past several years, there has been a tremendous increase in the use of electro-acoustic impedance bridge (also called the impedance audiometer) in the major medical centers and audiology clinics in this country. Impedance measurements, including typanometry, are an integral part of a complete hearing evaluation done on more than 90 per cent of the patients seen in the audiology clinic at West Virginia University Medical Center. Several otologists, hospitals, and community clinics in West Virginia are using impedance bridges. The Harrison County and Roane County school systems are using impedance measurements in combination with pure tone audiometry in their hearing screening programs. Other counties are sure to follow this leadership once they realize the value of these measures in better identifying children with ear pathology.

The purpose of this paper is to familiarize the physician with tympanometry—what it is, how it is performed, and its diagnostic implications. Tympanometry is only one of several measurements of the auditory mechanism which can be accomplished with the impedance bridge. It also offers objective information regarding sensory versus neural pathology, VIIth and VIIIth cranial nerve function, and a highly accurate estimate of degree of hearing acuity.

Since tympanometry does not require voluntary responses, it offers an objectivity which is not present in conventional audiometric tests. It is an efficient, easy-to-use system which does not require expensive sound-treated rooms or even a quiet area to obtain valid measurements.

The Author

- **Robert C. Cody, M. A., Associate Professor and Director of Speech and Hearing Clinic, Division of Otolaryngology, West Virginia University Medical Center, Morgantown.**

It is well-tolerated by patients of all ages, from newborns through geriatrics, and affords precise detection of abnormalities of the middle ear system. In addition, these procedures can be done by a well-trained technician or nurse.

Impedance Bridge Design and Principles

The impedance bridge is similar to a pure-tone audiometer. It has a specially designed headset with an audiometer earphone on one side and a three-function metal probe on the other side (Figure 1). The metal probe is fitted into the

Figure 1. Mr. Cody administering impedance audiometry tests to a "patient" (Mrs. Phyllis Flowers, M. A., Instructor of Audiology, Audiology Clinic, WVU Medical Center).

ear canal in an air-tight fashion with a soft rubber or plastic cuff.

The test probe (Figure 2) is designed in such a way that a pure tone (220 Hz) is introduced through one port; a second port communicates with a pick-up microphone which monitors the sound pressure level (SPL) of the probe tone in the ear canal space; and the third port communicates with an air pump which is capable of varying air pressure (negative or positive) in the ear canal. All measurements done by the impedance bridge are dependent on the fact that the volume of a cavity can be determined by measuring the SPL of a pure tone introduced into that cavity. The basis of impedance measurements, then, is the determination of the volume and equivalent volume changes of the ear canal space under various air pressure conditions.

The impedance bridge is actually a small sound level meter designed to measure the SPL in a small cavity. This small cavity, of course, is the space existing between the test probe and the eardrum. The bridge emits a 220 Hz probe tone into the ear canal and then measures the SPL of that tone.

The face of the bridge (Figure 3) has a calibrated scale which, when the probe tone has reached a level of 85 dB SPL, will indicate the physical volume of the ear canal space. This is called the Physical Volume Test (PVT), which is done with the air pressure at +200 mm./water standard. The PVT is useful in determining if an eardrum is intact or not intact. Normal volume for an adult ear canal is from about 1.0 to 1.5 cubic centimeters and for that of a child's about 0.5 to 1.0 cc. If the eardrum has a perforation, the PVT would encompass not only the volume of the ear canal, but that of the whole middle ear space and would be three, four or five times the normal volume. The PVT can tell us immediately if the eardrum is intact, perforated, or if a ventilation tube is patent or not. This can be done without visually examining an ear with an otoscope. It has been of tremendous assistance in detecting pin-point perforations that cannot be easily seen or are out of the visual range of the otoscopic examination.

By varying the air pressure in the ear canal it is possible to determine the condition of the eardrum and middle ear system by measuring the amount of the probe tone energy reflected back from these structures. How much or how little probe tone energy is reflected back from the eardrum offers valuable diagnostic information. For example, in an ear with otitis media with fluid filling the middle ear space, the eardrum will be very stiff. A large amount of the probe tone energy will be reflected away from the stiffened drum, creating a very high SPL in the ear canal space. In a normal ear, nothing is interfering

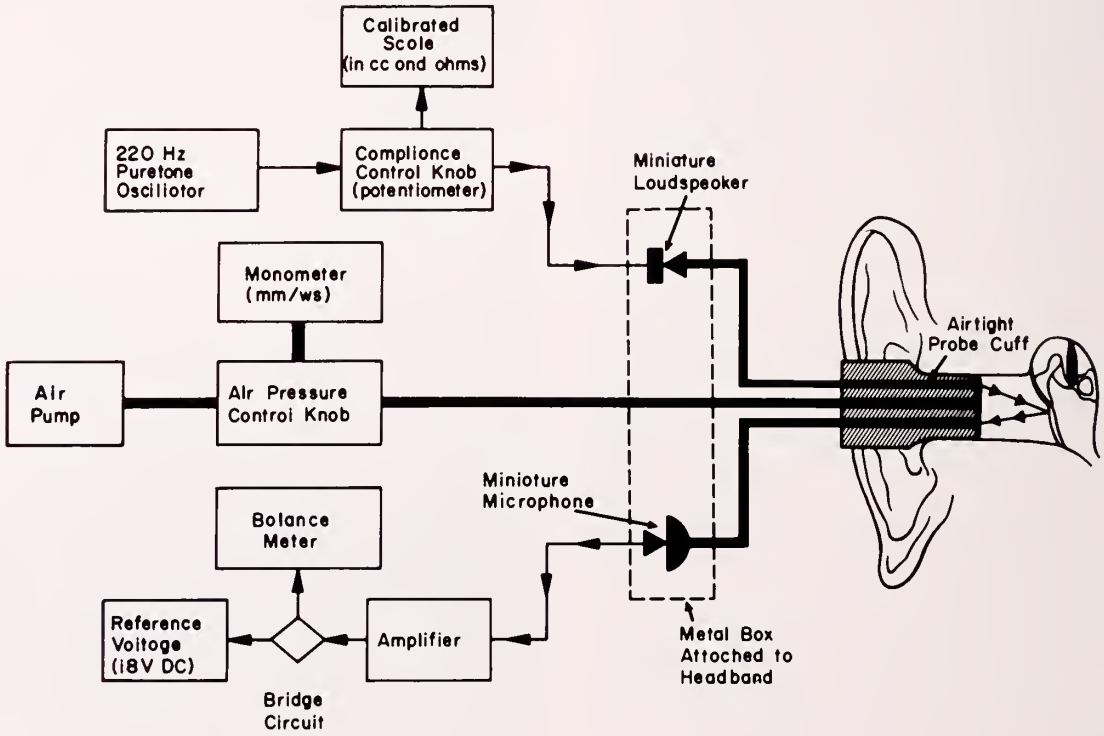


Figure 2. Schematic diagram of principal components of the Madsen Electronics Company electroacoustic impedance bridge.

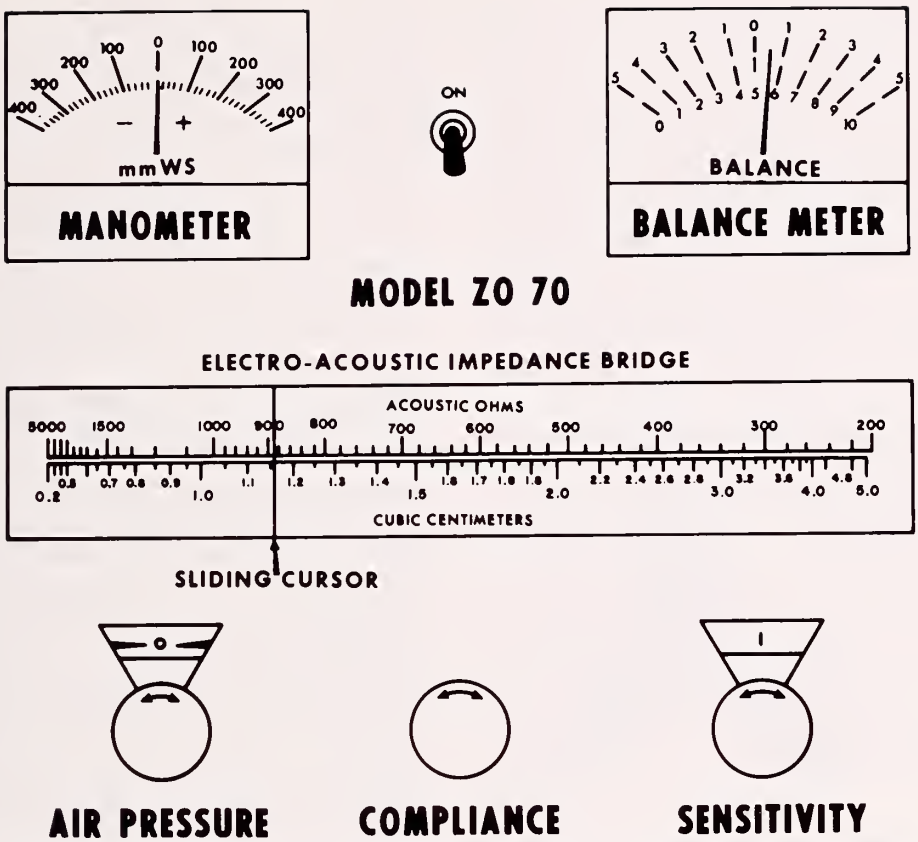


Figure 3. Line drawing of controls, meters, and calibrated scale found on the Madsen Electronics Company electroacoustic impedance bridge.

with the transmission of the probe tone through the middle ear system and a much lower SPL is produced in the ear canal. The opposite extreme of the first example is an ear with an ossicular discontinuity producing a very flaccid eardrum. Most of the probe tone energy will be absorbed by this system and a very low SPL is found in the ear canal cavity. By measuring how much resistance (impedance) the eardrum and middle ear offer to the transmission of sound to the cochlea, the impedance bridge can easily determine if that system is normal or not normal.

Tympanometry

Tympanometry measures how the impedance characteristics of the middle ear change as air pressure is varied in the ear canal. It is probably the most widely used measure performed with the impedance bridge. Tympanometry usually covers a range of air pressure changes from +200 to −400 mm./water standard. Results are plotted on a form called a *tympanogram*, with compliance along the ordinate and air pressure along the abscissa. Tympanometry is actually a dynamic graphic record of the mobility of the middle ear system as pressure is varied from positive to negative values in the ear canal.

In general, tympanograms are classified as one of several different "types" according to the maximum point of eardrum compliance (mobility) and the air pressure value at which that peak occurs. The peak represents the point at which air pressure is equal on both sides of the eardrum. In Figure 4, the upper graph shows three kinds of Type A tympanograms: the A, A_S (shallow), and the A_D (deep).

Type A: the maximum compliance peak is sharply defined and occurs within the normal range of middle ear air pressures (+50 to −100 mm./water). *This is a normal tympanogram.* It indicates normal middle ear function, and occurs in persons with normal hearing or in sensorineural type hearing loss.

Type A_S: similar to the Type A, but the peak is more shallow. This type of tympanogram is usually seen in patients with a fixation of the ossicular chain, as in otosclerosis.

Type A_D: similar, also, to the Type A, but the peak occurs off the top of the tympanogram. This indicates the middle ear system is excessively mobile and is usually seen in patients with very hypermobile eardrums or with ossicular chain disruption.

The middle graph shows two other classical tympanograms: Type B and C.

Type B: a very flat curve with no discernible peak (or a very rounded peak). When a Type B is found, special attention should be paid to the PVT. If the volume of the canal is within the normal range, we can assume the eardrum is intact and there is probably fluid in the middle ear space. If a ventilation tube has been placed in the eardrum, it indicates that the lumin of the tube is not patent. If the volume is very large, the eardrum is not intact and we are measuring the middle ear space through a perforation of a patent ventilation tube. (This is an excellent test for checking the patency of ventilation tubes.) Lastly, if the volume is unusually small, the ear canal itself may be occluded with earwax, foreign object, stenosis or atresia.

Type C: the maximum compliance peak is sharp and clear, but it occurs in the negative pressure region. This results from middle ear air pressure being less than normal and is a direct indication the Eustachian tube is not functioning normally to equilibrate pressure. A retracted eardrum is usually seen and fluid may or may not be present in the middle ear.

The lower graph shows an interesting tympanogram which is seldom seen and has been labeled Type W:

Type W: a bimodal maximum compliance peak. Usually, it is seen in patients with chronic middle ear disease or in some cases as a result of middle ear surgery.

It is important to note that *any tympanogram differing from the normal Type A is an indication of an abnormal eardrum or middle ear system.*

Tympanometry is extremely sensitive to changes in the middle ear. It is an excellent means of identifying ear pathology. It is also useful in monitoring the progression of otitis media and its response to treatment. Figure 5 shows a series of tympanograms on a child treated for otitis media. Notice how the fluid-filled middle ear first shows a Type B tympanogram because the fluid inhibits the eardrum from its normal mobility. Then, as treatment is effected and fluid is evacuated, the subsequent tympanograms demonstrate the recovery of the middle ear system to normal function.

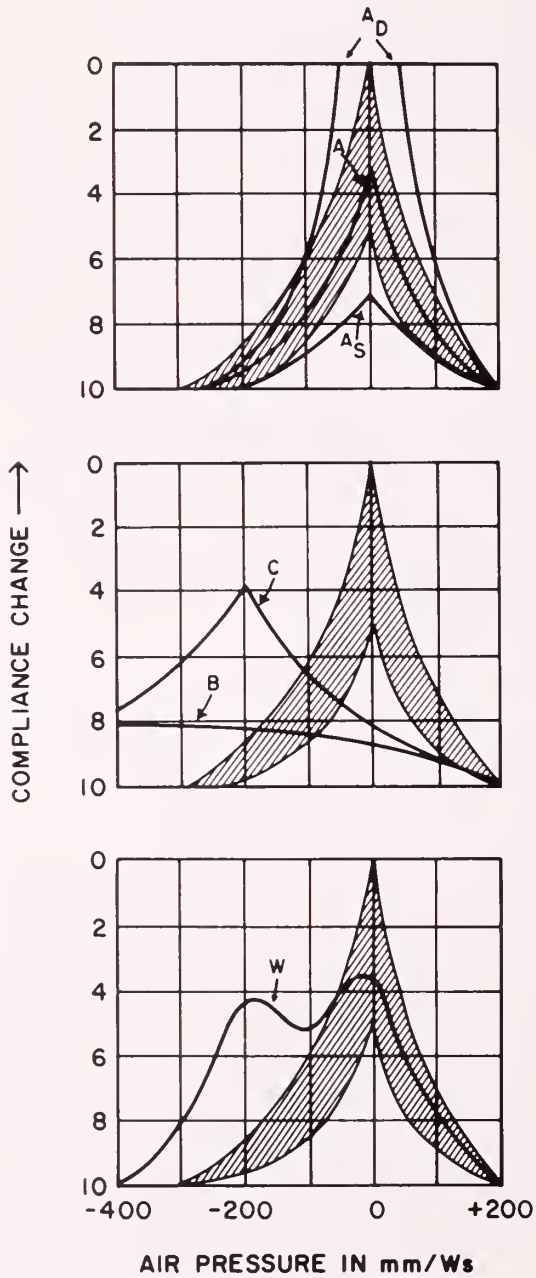


Figure 4. Tympanogram types (shaded area is the normal range). Type A, A_d, A_s, B, and C are typical findings. Type W is atypical but sometimes found in ears with chronic middle ear disease or as a result of middle ear surgery.

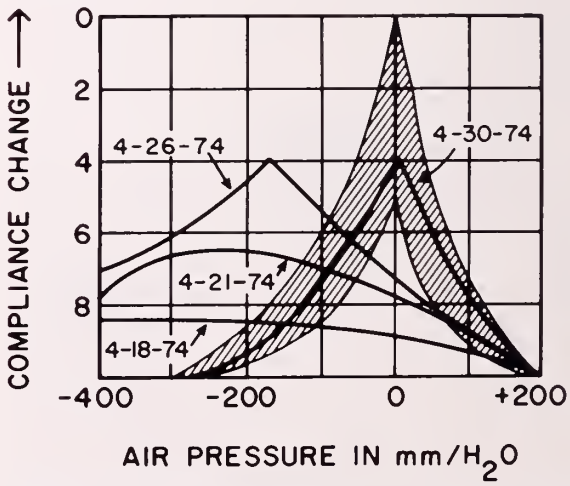


Figure 5. Serial tympanograms of resolving otitis media. Notice the progression from a Type B (4-18-74) through Type C and, finally, to a Type A (4-30-74).

Conclusions

Tympanometric and impedance measurements done with an impedance bridge are objective and relatively easy to obtain. They can be done on patients of all ages: newborns, infants, school-age children and adults. Since only passive cooperation is required, the mentally retarded and other patients difficult to test with conventional audiometry can be evaluated with exacting accuracy. Very little time is needed; an experienced clinician can perform these tests in only a few *seconds* per ear.

Since tympanometry is very sensitive to conditions of the middle ear, it is an invaluable diagnostic tool to the physician and the audiologist. Coupled with pure-tone audiometry, tympanometry offers the school hearing screening personnel the best available means of identifying children with ear problems.

Tympano-audiometric hearing screening in the Harrison County schools (1974-75) offers dramatic evidence to support tympanometry. Of 2,144 children screened, 282 failed to pass the screening criteria. Of these 282 children, only 108 would have been identified by pure-tone audiometry alone (41 of these *also* failed tympanometric screening). Tympanometry *alone* identified 174 children who had passed pure-tone audiometry. In summarizing, pure-tone audiometry identified 38 per cent, while tympanometry identified 75 per cent of the children failing screening. The Roane County schools also included impedance measurements in their hearing screening program. Although they have not released a statistical report, they have found these measures invaluable in identifying ear problems.

Tympanometry has added a new dimension to the ability to identify middle ear problems which go undetected by conventional audiometric tests. Tympanometry is not a test for hearing acuity; it does not eliminate the need for pure-tone audiometry. It can tell us about the condition of the middle ear and there are many implications we can derive from it, but it is a complement to, not a replacement for, pure-tone audiometry. With the increased use of impedance bridges in hearing clinics, physicians' offices, and the school screening programs of the state, it behooves the physician to become more familiar with these measurements. It is hoped this paper will help answer your needs in the understanding and interpretation of tympanometry.

Manuscript Information

Manuscripts to be presented for publication in *The West Virginia Medical Journal* should be typewritten, triple-spaced, on one side only of firm (no onion skin or flimsy), standard letter sized (8 1/2 by 11 in.) white paper. Wide margins (at least 1 1/4 in. on left) should be left free of typing. On the first or title page should be shown the title of the article, the name (or names) of the author, and his degrees. Pages should be numbered consecutively, the page number being shown in the right upper corner along with the surname of the author.

Authors are requested to submit a carbon copy with the original.

Illustrations should be numbered and their approximate locations shown in the text. Each should be identified by placing on its back the author's name, its number and an indication of its "top." Drawings and charts intended for reproduction should be done in black (India) ink on pure white. Photographs should be on glossy paper and minimum of about 5 by 7 in. in size. A legend should be provided for each illustration and, preferably, attached to it.

All scientific material appearing in *The Journal* is reviewed by the Editorial Board. Manuscripts should be mailed to The Editor, West Virginia Medical Journal, Box 1031, Charleston, W. Va. 25324.

Clinical Experience With Intrauterine Devices As A Means Of Contraception In Kanawha County, West Virginia

Saeed Mahmoodian, M. D.

THE purpose of this paper is to report our experience with intrauterine contraceptive devices in 279 patients during the three-year period ending December 31, 1971.

Throughout the ages, the control of man's fertility has been an object of many fascinating imaginative efforts. About 2,000 years ago, Hippocrates described the technique of inserting suppositories, including stones, for contraception into the uterus. In the ninth century, a Persian medical writer, Al Razi, described a method of screwing a piece of paper up tightly in the shape of a probe, winding it with thread and inserting the probe into the uterus for a few weeks to prevent pregnancy. Such knowledge was used for centuries in the area of animal husbandry by Arabian camel drivers who inserted stones into the camels' uteri to avoid having skittish, pregnant camels during long trips.

The medical forerunner of the modern intrauterine contraceptive was the stem pessary, first described and illustrated in the *Lancet* in 1868. Originally used for retroversion of the uterus, its contraceptive function must quickly have been noted because, ten years later, Dr. C. Routh informed the obstetrical section of the B.M.A. that these intrauterine stems were being worn permanently by women of high social standards to prevent conception. Consequently, by the end of the nineteenth century, I.U.D.'s were prominently featured in surgical catalogues. The earliest form of strictly intrauterine contraception was a coil of silkworm thread secured by silver wire which was quickly superseded by an 18-mm.-diameter pliable ring of coiled silver wire. Such rings were popularized during the 1920's by Grafenburg in Germany and by Norman Haire in Great Britain. Although Grafenburg claimed a high success rate for his ring, the device fell into disfavor as the result of a number of unfavorable reports.

Interest in intrauterine devices was reawakened when biologically inert plastics were developed during the 1950's; and in Japan, Kondo and Ishihama achieved considerable success using rings constructed from nylon and polyethylene. This development attracted the attention of the American Population Council, which by the late 1950's was searching for promising avenues of research relevant to population control in underdeveloped countries. Between 1959 and 1962, the Council spent 1.5 million dollars in support of this work; however, intrauterine devices did not come into widespread use until after 1962, following an international conference sponsored by the Population Council.

The Author

- **Saeed Mahmoodian, M. D., in the private practice of obstetrics and gynecology, Clarksburg, West Virginia; and formerly Consultant to the Kanawha County Health Department, in Charleston, West Virginia, for the Family Planning Project.**

The antifertility properties of metallic copper within the uterine cavity were demonstrated by Zipper in 1969. He reported that the addition of metallic copper to a polyethylene I.U.D. increases the antifertility action of an "inert" device. The end result of his work has been a collection of devices of various shapes and designs, made from inert polyethylene together with a modified addition of metallic copper.

Material and Methods

Accepted for I.U.D. insertion were 279 patients, varying in age from 15 to 44 (Table 1). Many of this group were indigent and in parity from one to seven (Table 2).

TABLE 1
Age Distribution

Age Groups	15-19	20-24	25-29	30-34	35-39	40-44
No. of Patients	51	114	61	18	20	15

TABLE 2
Parity Distribution

Parity	1	2	3	4	5	6 & over
No. of Patients	69	86	54	22	25	23

A total of 289 intrauterine devices were inserted. The marital state of the patient was not a consideration, with the only exclusions being those with a history and pelvic finding suggestive of acute, subacute, or chronic pelvic infections. It was kept in mind that the I.U.D. is not, however, an ideal contraceptive for all women, as its use is contraindicated in patients who have uterine anomalies, dysmenorrhea, dysfunctional uterine bleeding, and cervical or uterine malignancies. Insertion was postponed, of course, on the presence of pregnancy or on the suspicion of such.

Insertions were performed on 127 patients at the time of their six weeks' postpartum check-up, with the occurrence of 17 spontaneous expulsions (13.5 per cent). Although some clinicians favor immediate postpartum insertion, studies indicate that the later the postpartum insertion, the better are the results in terms of retention of the device *in utero;* however, we preferred insertion at the six-weeks' postpartum medical examination.

One hundred and sixty-two insertions were performed in the non-postpartum state during the first 10 days of the menstrual cycle, thus avoiding interruption of an early pregnancy; and as the cervical canal is the most patent at this period of time, the insertions were thought to preclude difficulties. Insertion during menstruation was preferred, but this approach was not always practical in our clinical situation. Seven spontaneous expulsions occurred in this group, or a rate of 4.3 per cent.

Insertion was made only after an initial Pap smear and gonorrhea culture; and, at the time of insertion, careful, bimanual pelvic examinations were performed with special attention to the position, size, regularity, consistency, mobility, and sensitivity of the uterus. Traction was firmly applied to the cervix with a tenaculum and the device was gently introduced in the plane of the uterine lumen. With this procedure, the position of the uterus, whether normally curved toward the front (anteflexed), or turned back from the pelvic axis (retroverted), has little to do with uterine perforation or embeddings. These are usually produced or initiated by careless and hasty use of the sound or by overaggressive I.U.D. insertion.

Each patient was instructed as to self-examination, and a follow-up visit within two months was required. Every six months thereafter, pelvic examinations and reinspection of the I.U.D. locations were scheduled. During the re-visits, attention was made to all side effects having occurred since the previous visit. Each patient was counseled in regard to minor side effects, and potential major complications were explained in order that the necessity for immediate return for evaluation, in the event of such complications, would be realized.

Because expulsion is more likely to occur during the first few months, all the patients were given contraceptive foam and were advised to use it especially during the mid-cycle exposure to diminish the likelihood of unwanted pregnancy if unnoticed expulsion should occur.

One of the common problems encountered was the disappearance of transcervical threads (Figure 1). Either the threads were cut too short and could be found within the cervical canal, or they had been drawn inside the uterus because of uterine growth as a result of tumor or pregnancy. Other factors resulting in missing the tail of the I.U.D. were uterine perforation and unnoticed vaginal expulsion.

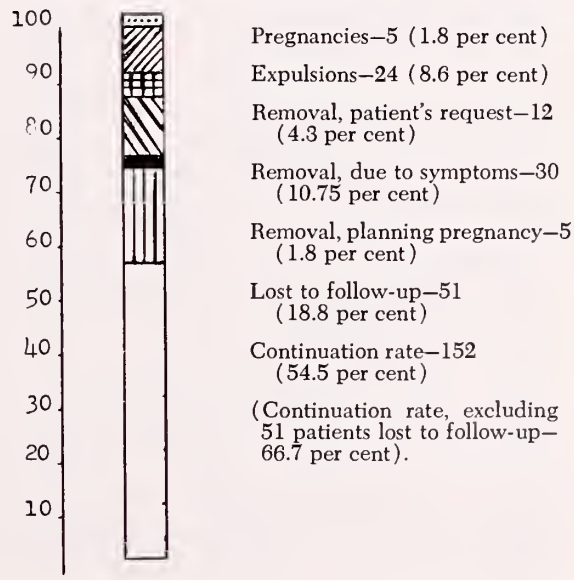
Results

During the three-year period, 76 women withdrew from the clinic after expulsion or removal of the device and 51 were lost to follow-up (no contact for 12 months or longer up to June, 1972). One hundred and fifty-two patients have retained the device from one to three years, a rate of 66.7 per cent (Table 3).

The occurrence of pregnancy during a total of 2,612 woman months with Lippes Loop was four (2.4 per 100 woman years), of which three

TABLE 3

Outcome of I.U.D. Insertion Based On 279 Patients



happened with a size-C loop, and one with a size-D loop. With the Saf-T-Coil, one pregnancy was recorded (2 per 100 woman years). One of the loop pregnancies terminated in abortion in the first trimester, and three of the loop and one of the Saf-T-Coil pregnancies were uneventful. All loop pregnancies were with size-C loops and one presented a problem. An attempt to remove the loop after an uneventful delivery in this patient was unsuccessful; the loop broke while the tip remained in the uterine wall. The remaining piece, although fractured, was removed with ease.

Loop expulsions, especially with loop size-C, were more frequent. This group experienced 23 expulsions, 17 of these being inserted during the postpartum period. Of the 23 expulsions of the loop, 19 were loop size-C. Only one expulsion occurred with Saf-T-Coil. Removal of symptoms was more frequent with loop size-D and Saf-T-Coil.

Discussion

Intrauterine devices are an effective method of contraception and have been used successfully for many years. As yet the true mechanism of antifertility actions of the devices is unknown. The devices perform a perfect antifertility action starting a few days after insertion and conception is possible a few days following its removal. If the device is much smaller than the endometrical cavity or if it becomes partially displaced in the endocervical canal, implantation becomes possible. The device neither blocks the ovaducts, nor slows down tubal peristalsis; and in the presence of the device, ovulation remains undisturbed, sperm ascent takes place, and fertilization does occur.

During recent years, much evidence has accumulated to demonstrate that ovarian function is unaffected by the presence of an I.U.D.; and in several of our cases a curettage performed at the time of removal of the device showed normal secretory endometrium. Morgulies and Tietze assumed that the I.U.D. stimulates peristalsis of the tubes to an extent that the ovum, even fertilized, reaches the unprepared uterus prematurely. Kelly and Morston, however, found that the pattern of tubal transport is not disturbed in the presence of an I.U.D.

The search for the primary mechanism of action of the I.U.D. in women has been narrowed to areas of local endometrial effects, either by producing low-grade inflammatory changes, or by local release of cytotoxic products produced by surface-controlled interaction with the endometrium.

Until recently, the method used to evaluate the effectiveness of contraceptives was Pearl's formula, which relates failure (pregnancy) rates per 100 woman years of exposure using the method under study. Since 1966, the effectiveness of contraceptive use has been measured by the life table approach, which provides cumulative rates of chosen events per 100 users during successive months (usually multiples of six) which may be computed as event rates or closure rates.

The Lippes Loop D has a 2.7 per cent pregnancy at the end of the first year: for any type of device, the pregnancy rate is greater in the first year, and pregnancy rates are higher for smaller devices than for larger devices of the same design. When pregnancies do occur with an I.U.D. *in utero*, the device is never located within the amniotic sac, as implantation occurs in the endometrium not immediately adjacent to the I.U.D.

We have found the following procedures quite satisfactory in the diagnosis and management of I.U.D. with missing transcervical thread.

Retracted string within the cervical canal can be explored by small polyp forceps and, if this fails to detect the retracted string, the possibility of intrauterine pregnancy should be excluded prior to any radiologic procedure. In case of pregnancy with the string visible, it is best to remove the I.U.D. as the abortion rate is lower after removal of devices than when it is left in site. If the appendage is not visible, however, then one should not attempt to probe the cavity to remove the I.U.D. As the devices are radiopaque, x-ray of the abdomen is the most simple and informative radiographic procedure (Figure 1). If the device is located within the pelvic cavity, introduction of a uterine sound and/or

Figure 1. 33-year-old G.3, P.3, female with loss of string and loop in the uterine cavity. Uterine sound could transmit the sensation of rubbing the hard surface of loop. The I.U.D. was embedded in the endometrium and had to be removed by D & C.

Figure 2. C.S., 19-year-old, G.1, P.1, female, postpartum loop insertion with uterine perforation and loop free in abdominal cavity. Hysterosalpingography is valuable in locating the misplaced I.U.D.

insertion of a second device should ascertain its exact location. Hysterosalpingography may provide valuable information.

Usually before hysterogram, the gentle insertion and moving of a uterine sound is sufficient to transmit to the hand of the physician the sound of the sensation of rubbing the hard surface of the device, being quite different from passing the sound over the velveted surface of the endometrium. Uterine perforation following insertion of an I.U.D. has been reported to occur with a frequency of 0.2 to 8.7 per 1,000 insertions and to occur most frequently when the device is inserted by an inexperienced physician.

Among the two uterine perforations recorded in this report, the devices were inserted in both cases by the members of the intern and resident staff at the time of the six-weeks' postpartum check-up. Devices in the peritoneal cavity were

Figure 3. D.C., 21-year-old, G.2, P.2, female postpartum loop insertion with uterine perforation and loop in Douglas pouch as shown by hysterography. The loop was removed by colpotomy incision.

removed vaginally by colpotomy incision in one case (Figure 3) and recovered by laparotomy in the other (Figure 2). Intraperitoneal I.U.D. is probably best removed although there is no evidence that leaving a loop within the peritoneal cavity is harmful.

Summary and Conclusions

In this paper are reported the insertions of 289 intrauterine devices. The rate of pregnancy associated with the I.U.D. used in our clinic is lower than that of others. This low rate, coupled with the simplicity and reversibility of the method, recommends the I.U.D. as an effective and valuable method of contraception. The use of an I.U.D. does not seem associated with a higher rate of pelvic inflammatory disease than seen in the general population of our gynecologic clinic.

The rate of complications is a reflection of patient population and relative inexperience of physicians (interns and residents) in our clinic. The high number of patients lost to follow-up apparently is a mirror of the socio-economic environment of the patient and the geographic features of the State of West Virginia.

References

1. Burnhill, M. S., and Birnberg, C. H.: Results of Early Puerperal Insertion of Intrauterine Bowes. Series No. 86, Encerpta Medica Internat. Congress, Amsterdam, 1965, P. 230.
2. Corfman, P. A., and Segal, S. J.: Biologic Effects of IUD. Am. J. Obstet. & Gynecol. 100:448, 1968.
3. Davis, H. D., and Lesinski, J.: Mechanism of Action of IUD. Obstet. & Gynecol. 36:350, 1970.
4. Davis, H. D.: The Shield Intrauterine Device. Am. J. Obstet. & Gynecol. 106:455, 1970.
5. Doyle, L. L., and Margalis, A.: Intrauterine Foreign Body. Fert. & Steril. 15:597, 1964.
6. Hall, H. H.; Stone, M. S., and Sedlis, A.: Intrauterine Ring for Conception Control. Fert. & Steril. 15:618, 1964.
7. Hall, R. E.: A Reappraisal of IUD. Am. J. Obstet. & Gynecol. 99:808, 1967.
8. Himes, N. E.: Medical History of Contraception. Gumut Pren., N. Y., 1936.
9. Malkani, P. I. K., and Sujan, S.: Am. J. Obstet. & Gynecol. 88:353, 1967.
10. Mazer, K.: Kamal, I., and Hefnair, F.: Fert. & Steril. 18:353, 1967.
11. Morston, J. R., and Kelly, W. H.: Contraceptive Action of Intrauterine Devices in the Rhesus Monkey. Nature. 214:735, 1967.
12. Noyes, R. W.; Bonney, W. A., et al: Searches for Ova in the Human Uterus and Tubes. Am. J. Obstet. & Gynecol. 96:157, 1966.
13. Pearl, R.: The Natural History of Population. Oxford Univ. Press, N. Y., 1939.
14. Peel, J., and Potts, M.: Contraceptive Practice. Cambridge Univ. Press, 1969.
15. Potts, M., and Pearson, R. M.: J. Obstet. & Gynecol. Brit. Comm. 74:129, 1967.
16. Rozin, S., and Shawartz, A.: Obstet. & Gynecol. 30:855, 1967.

17. Sagiroglu, N., and Sagiroglu, E.: Biologic Mode of Action of the Lippes Loop in Intrauterine Contraception. Am. J. Obstet. & Gynecol. 106:506, 1970.
18. Sedlis, A., and Renicle, J. V.: Am. J. Obstet. & Gynecol. in Pren., Davis, H. D., et al, Obstet. & Gynecol. 36:350, 1970.
19. Sobrero, A. J.: Intrauterine Devices in Clinical Practice. Family Planning Perspectives. 3:16, 1971.
20. Tietze, C.: In: The 3rd Progress Report, Cooperative Statistic Programs for the Evaluation of IUD. N. Y., 1964.
21. Tietze, C., and Lewit, S.: Advance in Planned Parenthood. Vol. 4, N. Y., Encerpta Medica, 1964.
22. Tietze, C.: Evaluation of Intrauterine Devices; Ninth Progress Report of the Cooperative Statistical Programs. Studies in Family Planning, No. 55, July, 1970.
23. Tietze, C.: Contraception with IUD. Am. J. Obstet. & Gynecol. 96:1043, 1966.
24. Willson, J. R., and Ledger, W. J.: Intrauterine Contraceptive Devices and the Recognition and Management of Uterine Perforation. Obstet. & Gynecol. 28:806, 1966.
25. Wishik, S. M., and Hulka, J. F.: Casebook for the IUD. Aug., 1969.
26. Bolognesse, R. J.; Corson, S. L., et al: Fert. & Steril. 19:294, 1968.
27. Williams Obstetrics Text Book, 13th Edition, Appleton-Century-Crafts, N. Y., 1966.

Rare Venereal Infection Becoming Common

CHLAMYDIAL infections, a disease rarely encountered by physicians in the past, are caused by a group of bacteria-like microorganisms that are sexually-transmitted. These infections often go unrecognized and little is known about them, except that they can cause serious inflammation of the urethra, eye and genital tract.

Before scientists can study the infections in order to determine how they work and how widespread they really are, it is first necessary to obtain an effective research mode. Dr. Almen L. Barron, a member of the American Association of Immunologists, is attempting to find such an animal model at this time. He is now exploring possible research model candidates, one of which is the guinea pig.

The seriousness of this disease's impact on the nation's health has not been clearly defined, but one study conducted at selected clinics in the San Francisco area indicated that of some 1,600 patients chlamydial infections represented the most common venereal disease.

Through animal research, effective tests recently have been developed to aid physicians in their diagnosis of chlamydial infections, according to the National Society for Medical Research. The society is encouraging more basic animal research in such areas.

Lens Implant In Cataract Surgery—Further Experience

M. C. Korstanje, M. D.

BETWEEN September, 1974, and October, 1975, the author performed 24 cases of lens prosthesis implantation as an adjunct to cataract removal. Selection of cases was based on the presence of monocular cataract with the opposite eye showing no cataract or only early cataract. The stage of cataract in the operated eye varied from late immature to mature stage. In all cases except one, the visual acuity was less than 20/100, and in most cases less than 20/400. Two cases of implant were done in patients having contact lens-corrected aphakia in the opposite eye. The younger age group senile cataract patient was not excluded from selection. The mean age of the patient was 68 years. The mode was in the 70 to 79-year age group. The range extended from 47 to 93 years (Figure 1).

The surgical technique followed closely the now-classic extracapsular method of Binkhorst. That is, all or as much as possible of the crystalline lens is removed, leaving *in situ* the posterior capsule and the capsular fornices which then act as a support, indeed a fixation, for the supporting thin wire haptic arms of the prosthetic lens.

The prosthetic lens employed was the Binkhorst iridocapsular lens, which consists of a methyl methacrylate optic from the back of which issue two platinum-iridium wire flanged feet—or haptics—which form fixation with the *in situ* posterior lens capsule (Figure 2). The lenses used are of German manufacture, although excellent models are now made in this country.

Diagram A, Figure 3, shows the normal position of the crystalline lens. Diagram B, Figure 3, shows the *in situ* lens capsule which has prolapsed slightly forward and now offers a lodgement for the haptics of the prosthetic lens.

Surgery was done in all instances with the aid of a Zeiss operating microscope, and closure of the wound done meticulously with the use of 7-10 10-0 Ethilon[R] sutures. The time employed for the total procedure was approximately 25 per cent longer than for a conventional cataract procedure. All cases, except one, were performed under local anesthesia.

The Author

- **M. C. Korstanje, M. D., 1508 Sixth Avenue, Huntington, West Virginia.**

Postoperatively, the patients were treated like routine postoperative cataract patients. That is, during the first 24 hours, the patients were kept on bed rest with bathroom privileges. Thereafter, physical activity was not limited. Routine postoperative pain medication consisted of aspirin one gram every four hours as needed. A minority of patients experienced moderate iris pain due to spasm of the pupil about the lens prosthesis. This was relieved by occasional weak mydriatic eye drop. Unusual postoperative redness of the eye was treated with Maxitrol[R] topical solution. The experience now is that all cases should be and can be safely dilated at five days postoperatively to prevent adhesions between the lens haptics and the pupil border (posterior synechia).

Major complication occurred in one case, that of a low grade anterior endophthalmitis which developed insidiously and arrested after an eight- to ten-week period as a non-phthisical light perception eye. This appeared to be an anterior segmentitis or phakitis possibly due to introduction of bacteria into the lens capsule with placement of the prosthetic lens. Further surgery has not been done to date, but it appears that this eye may well regain useful vision through discission of the dense posterior capsular membrane.

One case of prosthesis rotation occurred six months postoperatively. This promptly restabilized with the haptics in horizontal rather than the usual vertical position, and the eye has been subsequently quiet. A less severe problem was wrinkling of the cornea (striate keratopathy)

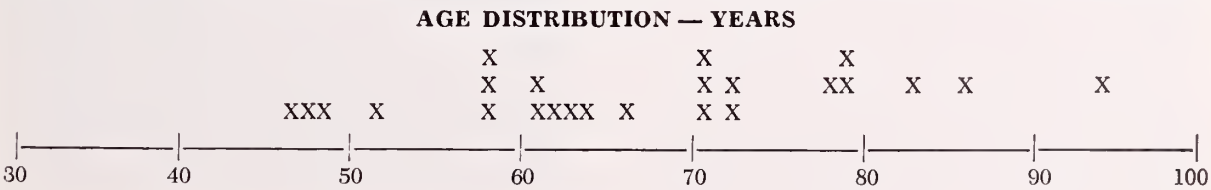


Figure 1.

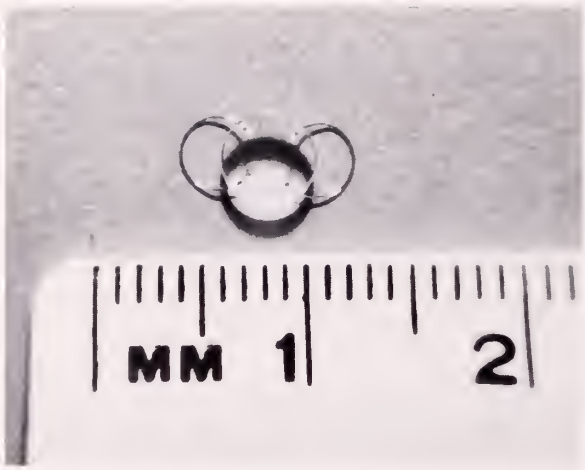


Figure 2.

which was present in 17 of the 24 cases (71 per cent). The mean duration of this was 12.5 days and all cases cleared, the extreme duration being 28 days.

Visual acuity results varied from poor to optimal. A careful refraction was done on each patient at each office visit. Figure 4 shows that after two weeks the best corrected visual acuity is in a wide spread from 20/20 to 20/200 or less with a heavy cluster of 20/200 or less. At six to eight weeks there is a shift toward the 20/20 to 30/30 range, and the 20/200-or-less cluster has diminished by one-half (Figure 5). Maximal acuity attained to the date of this writing showed 12 of 24 (50 per cent) in the 20/20 to 20/30 range, eight of 24 (25 per cent) in the 20/40 to 20/60 range, nine per cent in the 20/60 to 20/80 range, and nine per cent in the less-than-20/200 category (Figure 6). Of the latter, one is the anterior endophthalmitis complication and the other is a probable retinal macular problem coupled with after-cataract (thickened posterior capsule). Four of the cases (16 per cent) are considered to have sufficient after-cataract to cause significant visual acuity impairment. At this writing, no cases have undergone a second-stage procedure, consisting of discission of the posterior capsular membrane, or after-cataract, but the above four cases would probably experience improved visual acuity were this to be done. In Binkhorst's large early series, approximately 30 per cent required a second-stage discission procedure.[1] More recent communication indicates a lowering to 20 per cent.[2]

With the exception of the case of endophthalmitis complication, patient acceptance of the operative result and visual result was uniformly good—in some instances, enthusiastic. Especially gratifying has been the response of two patients, each of whom had undergone conventional cataract surgery in the opposite eye and who were wearing a Soflens[R] contact lens correction for the aphakia. In each case the overwhelming preference was for the visual result attained in the lens-implanted eye.

The preliminary experience of this writer as exemplified in these 24 cases would indicate a deserved position for lens implant surgery in the cataract-treatment armamentarium. In cases of advanced unilateral cataract, lens implant would seem to offer a special advantage. The handling problems and the economic problems of continued contact lens wear are obviated. With lens implant a more physiologic optics is obtained which, it is suspected, leads to the surprisingly quick patient acceptance of the result postoperatively, even in most of those cases where not better than 20/80 visual acuity is initially attained.

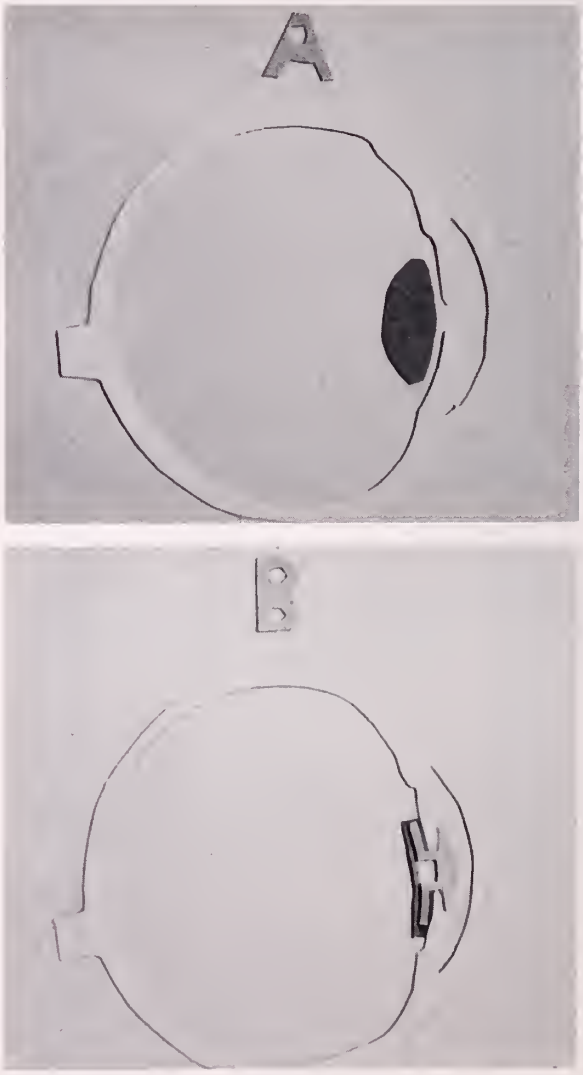


Figure 3.

Postoperative inflammatory signs and symptoms in these cases, with the exception of the instance of endophthalmitis, would indicate no greater incidence than with routine cataract surgery. No cases exhibited what can be interpreted as intolerance to the lens material or adverse tissue reaction to the implant. On the other hand, dramatic visual acuity improvement in the immediate postoperative period, as is often the result in intracapsular (whole lens) extraction, is not to be expected. This factor seems to be more than compensated for by the fact that a quite satisfactory visual acuity is attained within six to eight weeks in most cases (Figure 5), and that the more natural optics of the implant lens leads to a quicker acceptance than with contact lens use, not to mention the problems inherent in the use of aphakic spectacles. Based on this one year's experience, the writer presently plans to apply prosthetic lens implantation more broadly to cataract problems.

References

1. Binkhorst, C. D.: Twenty Years' Experience with Pseudophakia: Some Thoughts on the Fixation of Intraocular Lenses. Eye Group, Zeeland, Netherlands. Presented at the First International Course in Pseudophakia, Netherlands, June, 1974.
2. Binkhorst, C. D.: Fourth International Lens Implant Course. Elizabeth Hospital, Sluiskil (Terneuzen), Netherlands. October 14 and 15, 1975.

BEST-CORRECTED VISUAL ACUITY — TWO WEEKS

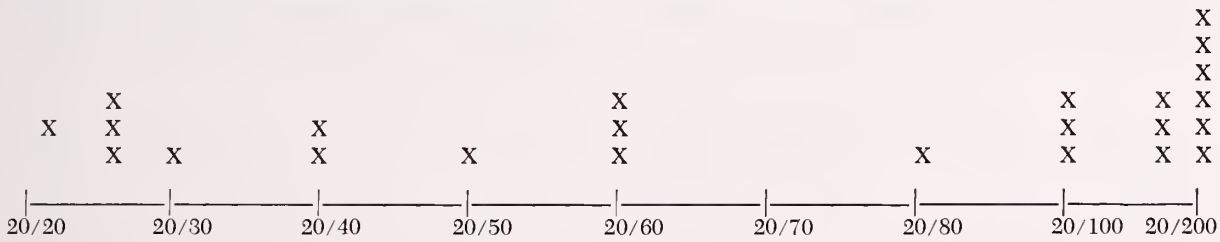


Figure 4.

SIX TO EIGHT WEEKS VISUAL ACUITY

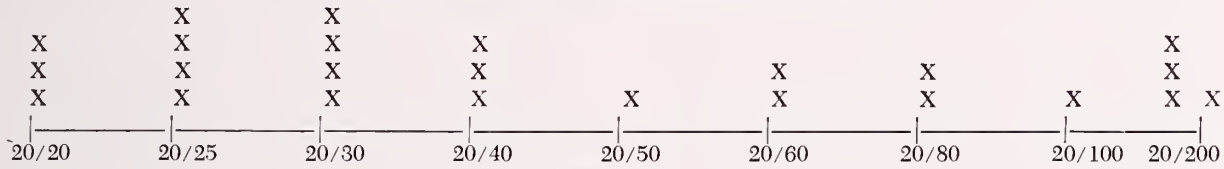


Figure 5.

MAXIMAL ACUITIES TO DATE
(3 weeks to 12 months)

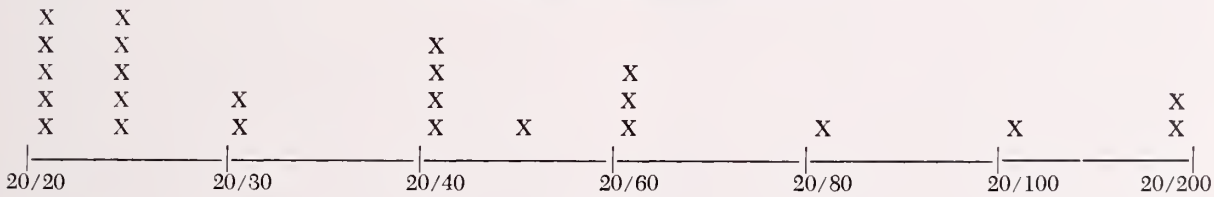


Figure 6.

Medical Grand Rounds

From the West Virginia University Medical Center

Edited By

Raymond B. Weiss, M. D.
Associate Professor of Medicine

Pheochromocytoma

Discussants: Phillip J. Peters, M. D.; and Robert J. Marshall, M. D.

Phillip J. Peters, M. D., Medical Resident, Department of Medicine, West Virginia University Hospital.

Case Report

The patient is a 47-year-old woman. During induction of anesthesia for an unrelated surgical procedure in her local hospital, she became severely hypertensive (blood pressure 280/160 mmHg). Anesthesia was stopped, antihypertensive treatment was given, and she recovered promptly.

She was seen in consultation by Dr. James T. Hughes, Ripley, West Virginia, who obtained a history of hypertension for the previous several years. Antihypertensive drugs had been prescribed, but she did not take them regularly. For several months she had had occasional spells of severe headache, flushing, and numbness.

Palpation revealed a large left-sided abdominal mass and caused a marked, though transient, rise in blood pressure. Doctor Hughes' diagnosis of pheochromocytoma was confirmed by the results of a 24-hour urine collection, and he referred the patient to the Division of Cardiology, West Virginia University Medical Center, for further evaluation and treatment.

Relevant physical findings were as follows:

She was slightly obese. The fundi showed slight arterial narrowing with a few small exudates. The blood pressure was 160/90 mmHg in each arm, and there was no orthostatic fall. A Grade 2 of 6 early systolic ejection murmur was best heard along the upper left sternal border. A large rounded mass filled most of the left side of the abdomen; there was no bruit.

The hemoglobin was 11.5 gm. per cent. The urine contained 1+ albumin. Routine chemical tests (SMA 6/60 and 12/60) were within normal limits. A 24-hour urine collection contained abnormally large amounts of epinephrine (70 μg) as well as norepinephrine (210 μg). The ECG did not provide criteria for left ventricular hypertrophy. A P-A chest film was normal. An abdominal film confirmed the presence of a large oval mass (Figure 1). An intravenous pyelogram showed downward displacement and rotation of the left kidney, while oblique projections following a barium meal showed displacement of the stomach and colon (Figure 2). These films, which were of excellent quality, were obtained on loan from the referring hospital.

Further radiological studies were made in the Cardiac Catheterization Laboratory. An abdominal aortogram showed multiple nutrient vessels, while a selective left renal ciné-arteriogram showed downward and medial displacement of the renal artery with a number of branches supplying the pheochromocytoma. The right adrenal gland was free from tumor. The intra-aortic pressure increased only slightly (from 205/100 to 215/100 mmHg) during performance of these tests, and Regitine (phentolamine) was not required for blood pressure control. However, 5 mg. Regitine was subsequently injected intravenously and resulted in a prompt decrease in blood pressure from 210/90 to 160/70 mmHg.

The patient was seen in consultation by Dr. Walter H. Moran, Professor of Surgery, who recommended that she be discharged, and to take increasing amounts of phenoxybenzamine (Dibenzyline), an alpha-adrenergic blocking agent, for preoperative preparation. She was to be readmitted 10 days following her discharge for removal of the tumor.

Figure 1. Intravenous pyelogram showing downward displacement of left kidney by the pheochromocytoma.

Figure 2. Barium meal examination showing that the tumor displaces the stomach upwards and medially, and the transverse colon downwards and to the left.

Robert J. Marshall, M. D., Professor, Division of Cardiovascular Disease.

Historical Features

The term "pheochromocytoma," coined by Pick in 1922, means a tumor composed of cells staining darkly (pheo-) with chromium salts. Such tumors were recognized by pathologists more than 100 years ago, and von Fraenckel gave a detailed pathological description in 1886.[1] Although Péyron, in his thesis to the Medical Faculty in Paris in 1917,[2] referred to their clinical consequences, the first comprehensive clinico-pathological correlation was made in 1922, also in Paris, by Labbé, Tinel and Doumer.[3] Their description of the clinical features, including the surges or paroxysms of hypertension, is a classic, and their suggestion that these are due to intermittent discharge of hypertensive amines has been amply confirmed.

The first successful operations for removal of pheochromocytoma were performed almost simultaneously in 1927 by Roux in Lausanne.[4] and by Charles Mayo at the Mayo Clinic.[5]

Kremer (1936)[6] and Palmer and Castleman (1937)[7] showed that sustained (as opposed to paroxysmal) hypertension could be due to pheochromocytoma. In fact, we now know that the majority of pheochrome tumors have more or less sustained, as opposed to paroxysmal, hypertension.

Increasing awareness of the entity, coupled with progressive refinements in diagnostic techniques (indirect pharmacological, angiographic and urinary pharmacological assay), has led to a continuing increase in the number of cases reported. Thus, in the world literature,[8] nine clinical cases were published before 1930; 18 in the next decade; 101 in the next; 351 in the next; and more than 1,000 in the 1960's. Since a minority of cases is ever reported, the true incidence is much higher, and the possibility must always be kept in mind in the evaluation of hypertension, especially when unusual symptoms are present.

Origin of the Tumor

The sympathogonia, parent cells of the peripheral sympathetic nervous system, and in turn deriving from the ectoderm of the neural crest, differentiate along two lines: (1) The first line leads to the formation of sympathetic ganglia; along the way, faulty differentiation may lead to the formation of several types of tumor in which the neuroblastoma (occurring mainly in children) is most lethal; and (2) The second line leads to the formation of chromaffin tissue which is scattered extensively through the body. Tumors (paragangliomas or pheochromocytomas) resulting from faulty differentiation of this line may likewise be found in many sites, including the celiac, aortic and hypogastric plexuses; rare sites include the thorax, the urinary bladder, the testis, and the ovary. However, about 90 per cent of all pheochromocytomas arise in the adrenal medulla, and about 10 per cent of them are bilateral. The tumors may or may not be capsulated, and may vary widely in size, from 3 g to 3 kg.[9]

Malignancy cannot be diagnosed with certainty on histological grounds. However, the recent observation of Anton *et al*[10] of an increased

TABLE 1

Incidence of Various Symptoms in Patients With Pheochromocytoma*

Symptom	*Per Cent Of Cases*
Headache	80
Sweating	71
Palpitation	64
Pallor	72
Weakness	28
Anxiety	22
Epigastric pain	22
Chest pain	19
Dyspnea	19
Flushing	18

(Others include paresthesiae, blurred vision, dizziness, and convulsions.)

*After Thomas, et al., J.A.M.A., 197:754, 1967.

secretion rate of DOPA (the first catechol on the biosynthetic pathway from tyrosine to norepinephrine and epinephrine) in association with malignant tumor suggests a possible biochemical identification of malignancy.

Symptoms and Signs

As previously noted, the hypertension may be paroxysmal or persistent. In the former, the paroxysms may occur frequently or at long intervals; individual paroxysms may last from seconds to days. Table 1 lists the symptoms in decreasing order of frequency from the extensive experience at the Mayo Clinic.

Blood pressure during the attacks usually exceeds 200/100 mmHg. After the attack the patient is fatigued.

While paroxysms may occur without apparent cause, certain situations predispose to them (Table 2). Patients with persistent hypertension usually have fewer and milder symptoms than those with paroxysms.

Diagnosis in the presymptomatic stage is uncommon. One of our earlier patients, then a pharmacy student at West Virginia University, diagnosed the condition in himself as a result of his analyzing his own urine for catecholamines in a pharmacology class experiment!

TABLE 2

Factors Precipitating Paroxysms of Hypertension

Change of posture
Exertion
Abdominal pressure
Pregnancy and childbirth
Meals
Alcohol
Hyperventilation
Pain
Laughing or sneezing
Urination (bladder tumor)
Drugs (e.g. propranolol)
Histamine test for gastric acid
Perirenal air insufflation

Because of the wide variety of symptoms and metabolic changes, especially in paroxysmal cases, a number of conditions may need to be considered in the differential diagnosis (Table 3).

Confirmation of the diagnosis results from the use of a variety of pharmacological and/or chemical tests, which will be discussed by Doctor Peters. Localization of the tumor is provided by selective angiography, which has been both safe and successful in all cases diagnosed to date at West Virginia University. Angiography will not be discussed further here.

TABLE 3

Conditions to be Considered in Differential Diagnosis

Essential hypertension
Malignant hypertension
Thyrotoxicosis
Neurosis (esp. anxiety)
Hyperventilation syndrome
Hyper/hypo-tensive reactions during pregnancy
Unexpected pressor/depressor reactions to antihypertensive drugs
Hypotension after phenothiazine tranquilizers
Carcinoidosis

Phillip J. Peters, M. D.

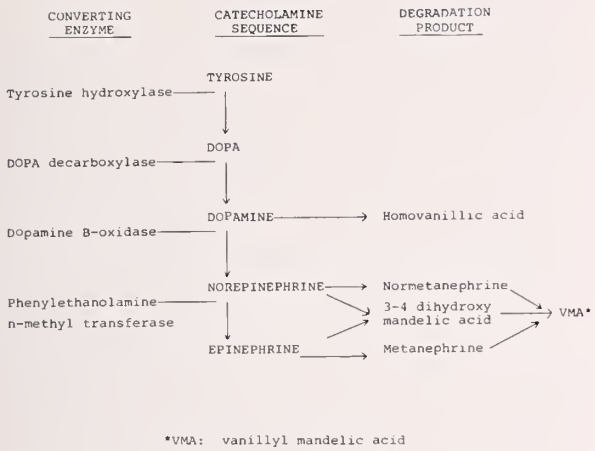
Special Tests

Table 4 shows the stages in the synthesis of norepinephrine and epinephrine from tyrosine. Both these catecholamines are synthesized in the adrenal medulla. However, epinephrine is not synthesized in extra-medullary chromaffin tissues due to the absence of phenylethanolamine n-methyl transferase.

Catecholamines produced in the adrenal medulla, the extra-medullary tissues, pheochromocytomas, and occasionally other non-chromaffin tumors of the sympathetic nervous system (ganglioneuromas or neuroblastomas) are metabolized in the liver. Urinary excretion of various degradation products (Table 4) permits indirect assessment of the rate at which catecholamines are being produced in the body.

(a) *Urinary VMA.* An aliquot of a 24-hour collection of acidified urine is used. Occasionally there are false negative results in patients who have been taking certain drugs such as monoamine oxidase inhibitors and alpha-methyl dopa. The relatively frequent false positive results found in the past (in patients consuming vanilla,

TABLE 4



tea, chocolate, etc.) can be prevented by avoiding use of the p-nitroaniline reaction.

(b) *Urinary metanephrine and normetanephrine.* An aliquot of acidified urine is also used for this. The relative simplicity of the method makes it very valuable. False positives may be obtained in patients taking monoamine oxidase inhibitors, alpha-methyl dopa and certain bronchodilators.

(c) *Urinary free catecholamines.* The free catecholamines represent only about two per cent of the total catecholamines. However, the method is of value in that it permits assay of the relative contributions of norepinephrine and epinephrine. As previously mentioned, epinephrine is elaborated only in the adrenal medulla. Thus, in a case in which angiographic methods have failed to localize the tumor, the finding of a significant proportion of epinephrine is strong evidence for the adrenal origin of the tumor (or tumors). Because the test is complex and expensive it is unsuitable as a screening test.

(d) *Plasma catecholamines.* This test is rarely used due to the difficulty in fluorimetric detection of the minute quantities of catecholamines in the plasma. In rare cases in which the tumor could not be localized either before or during operation, subsequent selective catheterization of various veins and analysis of their content of catechols has permitted eventual localization and removal.

Sometimes the urinary content of catecholamines or of their degradation products is normal, despite strong clinical suspicion of the presence of a tumor. This is most likely to occur in patients whose paroxysms are infrequent. In such cases, provocative pharmacological tests can be used. Due to the risk of provoking a hypertensive crisis, Regitine must be on hand for immediate use, if needed.

(e) *Histamine stimulation.* Twenty-five μg histamine base is given intravenously. This causes vasodilatation with a sharp initial decrease in arterial pressure, reflex discharge of catecholamines, and a marked secondary increase (by at least 60/40 mmHg over the initial value) in blood pressure.

(f) *Tyramine stimulation.* Rapid intravenous injection of 2 mg of tyramine increases the blood pressure by at least 60/40 mmHg. There are few false positives, but false negatives may occur, especially in cases of familial pheochromocytomas associated with medullary carcinoma of the thyroid. Tyramine exerts its effect by causing direct release of catecholmines from nerve endings.

(g) *Glucagon stimulation.* This test is less valuable than originally thought. Since the test depends on release of catecholamines from the adrenal medulla, it is of no value, or is even misleading, in extra-medullary tumors.

Associated Diseases

I wish to comment briefly on the occasional association of pheochromocytoma with other clinical situations. Probably about two per cent of cases are associated with von Recklinghausen's disease (neurofibromatosis), and occasional cases are associated with von Hippel-Lindau disease (retinal and cerebellar angiomatosis). There is rarely an association with adenoma or carcinoma of the thyroid gland. Parathyroid hyperplasia has been associated with bilateral adrenal medullary pheochromocytomas, secreting predominantly epinephrine, in a few cases of Sipple's Syndrome (multiple endocrine adenomatosis).[12]

"Myocarditis" with cardiac enlargement is an uncommon concomitant. As van Vliet and his associates[13] have pointed out, the myocardial degeneration is the direct consequence of high levels of circulating catecholamines.

More than 90 cases of pheochromocytoma have been reported during pregnancy. Both maternal (45 per cent) and fetal (35 per cent) mortality are high. The endocrine changes of pregnancy and compression of the tumor by the fetus may be important factors threatening life. Clearly, labor is a serious hazard in cases that have escaped detection until then.

Management

The treatment of choice is surgical removal. As in the case reported above, it should be preceded by two weeks' preparation with increasing doses of the alpha-adrenergic blocking agent, phenoxybenzamine. This preparation reduces surgical morbidity and aids the circulation to adapt itself to the sudden decrease in levels of circulating catechols after excision of the tumor. This latter point is important since, prior to the availability of alpha-adrenergic blocking agents, a number of patients developed hypotension and or shock in the early postoperative period.

Propranolol may be of value in relieving symptoms, particularly in patients with tachycardia and flushing resulting from beta-adrenergic receptor stimulation. However, it should never be used without concomitant use of alpha-receptor blockade; otherwise, a hypertensive crisis may result.[14]

Alpha-methyl tyrosine, which inhibits tyrosine hydroxylase, has been tried on an experimental basis, but it is too toxic for general use. For cases in which surgical excision is not possible, the only management available is long-term use of alpha-adrenergic blockade (phenoxybenzamine) with or without beta-adrenergic blockade (propranolol). Fortunately, this situation is not common.

Dr. Larry Martin, Department of Medicine: How do you decide which patients with hypertension should be investigated for a possible pheochromocytoma?

Doctor Marshall: A few years ago it was the fashion to carry out an exhausting (both physically and financially!) investigation of all patients with high blood pressure before treating them. However, since it is estimated that there are 22 million people in the United States with hypertension, that is not economically possible. In any case, 90 to 95 per cent of all hypertension is "essential," responding promptly to drug therapy. One should investigate thoroughly those patients who do not respond to initial therapy, and of course one should also investigate those in whom the history suggests an unusual variety of hypertension (e.g., paroxysms of headache and flushing, marked lability of blood pressure readings, severe hypertension in the absence of a family history, paradoxical response to propranolol therapy.)

Dr. Edmund Flink, Department of Medicine: I want to stress that provocative tests such as the histamine test are easily performed and are still valuable provided that recommended doses are used and appropriate precautions are taken. Their potential danger has been over-emphasized. The Regitine test is quite safe and is useful in patients with sustained hypertension.

Doctor Marshall: I agree. Furthermore, some sources still stress the danger of provoking a hypertensive crisis during aortography. We have had no such problem in any of the seven cases in which we localized the tumor by abdominal angiography. In fact, in my opinion, peri-renal air insufflation, proposed as an alternative, is the more hazardous technique of the two.

Dr. Stuart Chen, Division of Gastroenterology: The radiologists sometimes use glucagon in their examinations of the upper GI tract. This drug should be avoided in patients known to have or suspected of having pheochromocytomas.

Dr. Stanley Shane, Division of Endocrinology: With reference to the urine assays, one still reads about the need to keep a patient in the hospital for three days on a diet deficient in foods that produce urinary VMA before urine samples are collected. This should be avoided because of excessive hospital costs and because the tests are so rarely positive in any case. As Doctor Peters indicated, one can use a test that avoids this problem. Also, for "screening," one need only use one test (VMA, metanephrine, or catecholamines), not all three, unless the patient's story is highly suggestive and the initial test is negative. In this instance, one may have to use multiple tests.

Dr. Irma Ullrich, Division of Endocrinology: Although the patient has no evidence of Sipple's Syndrome, she may develop it later.

Doctor Marshall: That is possible, though perhaps unlikely, because the enormous size of her tumor suggests that it has already been growing for several, and perhaps, many years.

Let me comment briefly on surgical management, since Doctor Moran is unable to be here. Very careful mobilization of the tumor is essential to avoid a hypertensive crisis or a sudden cardiac arrhythmia. Should this occur, prompt infusion of phenoxybenzamine is indicated. Severe and sometimes prolonged hypotension is common in the early postoperative period, for two reasons. First, the body has become accustomed to high circulating levels of norepinephrine; when these are no longer present, after resection of the tumor, vasoconstriction is replaced by vasodilatation. Second, patients with pheochromocytoma are volume depleted, because of the vasoconstriction. Therefore, both infusion of catecholamines and blood volume repletion are often needed until circulatory homeostasis is restored.

Addendum

Three days after going home, the patient developed signs of cholecystitis. This settled with conservative management. She was readmitted according to plan and a prolonged operation, in which great care was taken to avoid manipulation of the tumor, was successful. The pheochromocytoma weighed 1,600 g. Doctor Moran also removed a diseased gallbladder. The immediate postoperative course was characterized by severe hypotension, but she responded to infusion of dopamine and blood volume repletion. At the time of discharge, her blood pressure was normal.

Doctor Hughes has drawn to our attention the fact that cholecystitis is very frequently found in association with pheochromocytoma. According to Page and Copeland,[15] the incidence may be as high as 50 per cent. Therefore, a cholecystogram is warranted as part of the preoperative evaluation of all patients with pheochromocytoma.

Acknowledgment

Our thanks are due to Dr. Nathaniel F. Rodman and his staff in the Department of Pathology for providing us with the results of the clinical laboratory tests.

References

1. Frankel, F. von: Ein Fall von deppelseitigem, völlig latent verlaufenen Nebennierentumor und gleichzeitiger Nephritis mit Veränderungen am Circulation—Apparat und Retinis. Arch. f. Path. Anat. 103:244, 1886.
2. Péyron, A.: Le paragangliome surrénale. Thèse, Paris, 1917.
3. Labbé, M., Tinel, J., and Doumer, P.: Crises solaires et hypertension paroxystique, en rapport avec une tumeur surrénale. Bull. Soc. Med. Hôp. Paris. 46:983, 1922.
4. Roux, G. Quoted by Muhl, R. von der: Contribution a l' étude des paragangliomes de la surrénale. Thèse, Lausanne, 1928.
5. Mayo, C.: Paroxysmal Hypertension with Tumor of Retroperitoneal Nerve. J.A.M.A. 139:1047, 1927.
6. Kremer, D. N.: Medullary Tumor of the Adrenal Gland with Hypertension and Juvenile Arteriosclerosis. A.M.A. Arch. Int. Med. 57:999, 1936.
7. Palmer, R. S., and Castleman, B.: Paraganglioma of the Adrenal Gland Simulating Malignant Hypertension. New Eng. J. Med. 219:793, 1938.
8. Hermann, H., and Mornex, R.: Human Tumours Secreting Catecholamines. New York, Macmillan, 1964.
9. Minno, A. M., Bennet, W. A., and Kvale, W. E.: Pheochromocytomas: A Study of 15 Cases Diagnosed at Autopsy. New Eng. J. Med. 251:959, 1954.
10. Anton, A. H., Greer, M., Sayre, D. F., and Williams, C. M.: Dihydroxyphenylalanine Secretion in a Malignant Pheochromocytoma. Am. J. Med. 42:469, 1967.
11. Sheps, S. G., and Maher, F. T.: Histamine and Glucagon Tests in the Diagnosis of Pheochromocytoma. J.A.M.A. 205:895, 1968.
12. Gray, R. S., and Gillon, J.: Normotensive Phaeochromocytoma with Hypercalcaemia: Correction after Adrenalectomy. Brit. Med. J. i:378, 1976.
13. Van Vliet, P. D.; Burchell, H. B., and Titus, J. C.: Local Myocarditis Associated with Pheochromocytoma. New Eng. J. Med. 274:1102, 1966.
14. Prichard, B. N. C., and Ross, E. J.: Use of Propranolol in Conjunction with Alpha Receptor Blocking Drugs in Pheochromocytoma. Am. J. Cardiol. 18:394, 1966.
15. Page, L. B., and Copeland, R. B.: D.M., January, 1968, pp. 5-40.

A message from . . .

The President

A BIT OF HEAVEN, WEST VIRGINIA

For Mrs. Leckie and me, one of our busiest years is near an end. In August, the State Medical Association leadership will pass to another dedicated and trusted colleague. Some additional thoughts on my stewardship will be in order at that time.

Early in June, in Kanawha County, Barbara and I completed visits to 19 component medical societies—a schedule which began in early September in Monongalia County. This experience, in itself, has been one of our most cherished.

At every stop, the hospitality and courtesy shown us was beyond description. We want each and every one of you, who were so kind and considerate, to be aware of our deep appreciation and gratitude.

On every possible occasion this year, I have said that, while it often hasn't been easy, serving as your President has been the outstanding experience of my lifetime. I have said over and over that this nation's system of health and medical care, with physicians the core of that system, is unmatched on this globe.

I have become increasingly convinced that the State Medical Association is a solid structure with virtually unlimited potential for advancing the public health and welfare—but I also have stressed time and again that this potential can be realized only if the individual physician BECOMES INVOLVED, and assumes ever-increasing personal responsibilities on behalf of his patients and his profession.

The visits around the state are, indeed, behind Barbara and me; but the challenges faced by all of us in medicine, on behalf of those for whom we provide care, will continue to grow.

Individually, and together, we can meet those challenges. Indeed, we MUST meet them, head on and with effective action and solutions, if our health care system is to remain a cornerstone for this nation's very life and existence.

Jack Leckie

Jack Leckie, M. D., *President*

THE WEST VIRGINIA MEDICAL JOURNAL

Official Organ of the West Virginia State Medical Association

The Publication Committee is not responsible for the authenticity of opinion or statements made by authors or in communications submitted to this Journal for publication. The author or communicant shall be held entirely responsible.

Published monthly on the first day of the month, at Charleston by the West Virginia State Medical Association. Original articles are accepted on condition that they are contributed exclusively to the Journal. Advertising rates furnished on request.

Address all communications to Business Manager, West Virginia Medical Journal, Box 1031, Charleston, West Virginia 25324. Phone 346-0551.

EDITORIALS

DEDICATION AND DR. JAY BRADISH

If there is a really meaningful synonym for medicine, it probably is "dedication." And while the hustle and bustle of the times might divert attention from this all-important element, a look into the past often serves to put everything back in focus.

Paragraphs which follow are from a letter written just recently to the National Parks Service, with a copy to the West Virginia State Medical Association, by Mrs. Harry Lund of Winston-Salem, North Carolina. She wondered if the Parks Service, and or the Medical Association, would be interested in having a small, handwritten ledger kept by her physician-father during a short period of service in West Virginia more than 40 years ago.

The Medical Association response was quick and pointed—we'd like very much to have the ledger, with a promise to protect its historical value, if the Parks Service did not have an interest in it.

But, through Mrs. Jean Bradish Lund's letter, let's relive a few months of rural medical practice in West Virginia, and perhaps reflect a bit with considerable pride on what medicine has meant, and still means, to the people of this state. Here are Mrs. Lund's very well written words:

"For a period of eight months in 1933 and 1934, my father was the only physician for 100 square miles in an area which is now in the Monongahela National Forest in West Virginia. We lived in one of three houses in a settlement which has now disappeared, Williams River, 20 miles from White Sulphur Springs. The manager for the Pocahontas and New River Coal Company lived in one house; the company store manager and his sister in the second, and our family in the third. Perhaps 20 additional families lived in freight cars placed in a T-fashion (two cars at right angles) on logs or other foundations.

"My father, Jay D. Bradish, M. D., had recently received a degree in public health from Harvard under the Rockefeller Foundation program, but in that depression year the funds for the research program for which he had been headed had dried up. Therefore, the U. S. Public Health Service sponsored his eight-month stay in West Virginia, tending the workers in the remote mining, lumber, and CCC camps. This ledger relates to the work there.

"I remember his having a vigorous argument with the officer of the coal company, demanding to be sent proper medicines and equipment, and the officer complaining that my father sent too many patients to the hospital, which was run by Catholic sisters at Richwood. The hospital charged $3 to $5 a day, which was thought far too expensive. There were no roads, only a railroad track (single track, I think) and my father traveled in a Ford coupe on railroad wheels, getting out to throw the switches manually at intersections. Our family car was kept at Gauley Bridge, "down the mountain," where the first roads appeared.

"The school was run by Moravian missionaries, and I still think that Miss Frankie Miller, who taught grades one through four in a two-room school (with one other teacher), was the very best teacher I ever had. Her face was badly scarred from burns received in a fire on a ship taking her to China as a missionary. She taught us around a low table, with a pot-bellied stove, bucket and dipper, and an outhouse for 'facilities.' And she treated us all like a loving mother. The first duty of the day was to check each child for cleanliness, wet clothing, and proper lunches carried in. Mittens were dried and long stockings and wet shoes stripped to dry. Some chil-

dren walked five miles over mountain trails. We were allowed to learn as fast as we could progress, and I placed two years in advance when I returned to urban schools.

"I believe you can tell that I remember that eight months as the happiest time of my childhood—with bear cubs, fawns, and many other pets, a forest to explore, a community pasture with cows, chickens and other animals, a swimming hole behind the school, and all the real luxuries of life, though we had no roads, no movies, an unreliable phone system operated on bells and poor radio reception in those mountains.

"At any rate, the ledger my father kept shows these things: a drawing of the location of the settlements of Dyer 71, Boggs, Dyer Old Camp, Tea Creek, Ken's Creek, Rock Lick, Williams River, Spice Run, Dyer, Donaldson, Rock House, Laurel Creek, Gauley Mills, Guy Wright Switch, Bolair, Miller Mill Run, Turkey Creek, Gauley Mines, Dyer Creek Right Fork, and Gibbs Camp.

"Also noted are the names of the patients tended in this 100-square mile area, the statistics concerning births of infants, notations about those with tuberculosis, lists of drugs and instruments needed, miles traveled, etc. For instance, on July 30, 1933, my father traveled 112 miles (on a Sunday) to visit 12 patients, and I note that more patients were seen on Saturday and Sunday than during the work week. I recall he was to have the services of a visiting nurse at times, but that often she could not get there, for what reason I don't know—maybe bad weather. He often delivered the patients to the hospital himself, and on more than one occasion kept a sick patient in our home—once a small infant, whose mother died, and we kept the baby until relatives could come for it. . . ."

RISK IN SUN-TANNING

A recent article in *The Journal of the American Medical Association* (April 28) predicts that during 1976 there will be 300,000 new cases of skin cancer. This is indeed a formidable figure. It is gratifying to know, however, that many of these skin cancers can be avoided. The American Cancer Society points out, ". . . it is believed that most nonmelanoma cutaneous cancers are caused by overexposure to sunlight. Thus, most skin cancers are preventable by avoidance and/or protection from excessive direct sun exposure."

Many people are presumably familiar with the danger of overexposure to sunlight, but certainly many are not. It is deemed fashionable among young people to procure a sun tan and as a consequence many of them will lie in the sun from time to time until most of their body becomes deeply tanned. It should be impressed upon the minds of these young people that excessive sun exposure may be extremely harmful to their skin, and particularly that there are long-term dangers. While it is true that probably only a few will develop skin cancer, overexposure to sunlight, nevertheless, causes a marked premature aging of the skin. The change produced is permanent and nothing can be done to alleviate it.

People should be advised not to sunbathe unless they use well-recognized sun protection lotions (some are worthless). Those unusually susceptible to sunlight should be advised not to lie in the sun during midday, at which time the harmful ultraviolet rays are most intense. Fair-skinned people should be especially careful about overexposure to sunlight because they have less melanin in their skin.

It is a pity that it is necessary to curtail excessive sun bathing, for it seems to relax many people and, furthermore, a deep tan is often quite becoming. On the other hand, the dangers associated with acquiring a deep tan are quite real, and people should be fully informed of the grave risks they run by overexposure to sunlight.

WORDS FREQUENTLY MISUSED BY PHYSICIANS

There are a number of words in the English language which are often misused by educated men, both in speaking and in writing. Despite the long academic training of the physician, there are instances when he is likely to misuse certain words. It seems worthwhile to call attention to these, especially those which the physician often uses in his practice.

The words *lay* and *lie* are probably the most misused words in the English language. Surely an educated person shudders when a medical student, an intern, a resident or a physician requests the patient to *lay* down when he should have asked him to *lie* down. The author of this editorial, unfortunately, has heard this mistake many, many times. Grammatically, *lay* is the causative of *lie*, that is, to lay means to cause to *lie*. Without going further into grammatical details, the following sentences may be helpful. "The book *lies* on the shelf." "I *lay* the book on the shelf." The misuse of these two words is considered a serious error by educated people.

The word *quite* may cause difficulty because its exact meaning is not always appreciated. The word means wholly or completely. If a physician

or a nurse informs an educated listener that his relative is *quite* ill, it is proper to interpret this to mean that the patient is seriously or dangerously ill. The word *quite* should never be used to mean partially.

The words *imply* and *infer* are frequently confused, although there is not much excuse for this because they have a different meaning. The word *imply* means to indicate or suggest, whereas *infer* means to judge or conclude what is implied. It is as simple as that. In the case of a physician-patient relationship, the physician implies and the patient *infers* from what the physician has mentioned.

The words *affect* and *effect*, especially when used as verbs, are often misused. The physician probably thinks of these words in connection with the effect of drugs on the body and the changes they bring about. *Affect* means to influence or produce an *effect* on; *effect* means to execute, or bring to pass, or accomplish. Some people find it hard to distinguish between the two. An example of these words used in a sentence may be of interest: An energy crisis would *affect* the manufacture of drugs and medical supplies, but a reconciliation is being fortunately *effected*. A person using either of these words should distinguish clearly in his mind exactly what he wishes to convey.

Finally, it may be said that over-emphasis should not be laid on the culture of the physician and his ability to speak and write correct English. It may be maintained by some that a broad knowledge of medicine and a sympathetic understanding of human nature are far more important. This may well be true, but the various concepts mentioned here are quite compatible. In our own country during this century, physicians such as Sir William Osler, Harvey Cushing, and Paul D. White are splendid examples of educated and cultured men who at the same time were outstanding clinicians.

Our Readers Speak

SUMMERS MAN APPROACHES 102

While we are celebrating our bicentennial, it is a pleasure to report the case history of a Summers County man who has lived more than half of our nation's 200 years of freedom. Aaron W. Freeland, known throughout Summers County, as "Poppy," was born February 15, 1875, at Mannington, Marion County, West Virginia. He was married on July 11, 1925, to Dora Hogan and they have five children, eleven grandchildren and two great grandchildren. "Poppy" was a lumberman and retired in 1949. He has been a patient in the office of Dr. B. W. McNeer of Hinton and at Mr. Freeland's home since 1949. He has had very few serious illnesses in his adult life, but the most serious was pneumonia sometime before 1925, and this resulted in empyema and had to be "drained." He has been hospitalized two or three times for incarcerated hernia which we were able to reduce without too much difficulty until the last time. He had phlebitis in 1959, and except for the wear and tear of added years, he has done extremely well until he was hospitalized in May, 1976, with incarcerated hernia.

In 1961, Mr. Freeland had incarceration of his hernia which Doctor NcNeer found most difficult to reduce. When reduction was obtained, Mr. Freeland was advised to have immediate surgery while he was still in reasonably good health. At that time, Mr. Freeland was 85 years of age. His reply to the advice was: "Oh, Doc, I'm much too old to be operated on."

There follows the operative report of Dr. Chandra P. Sharma, who was assisted by Dr. Mousa I. Dababna:

"This 101-year-old caucasian male was admitted to my service on May 15, 1976, with a right strangulated hernia of six hours duration. The patient was very hard of hearing with bilateral immature cataracts and vital signs of: temperature 99; pulse 84, regular, good volume; B/P 160/90, and respiration 24, normal in character. Cardiorespiratory system revealed rales at both bases of the lungs with normal heart sounds. There was Grade I edema of the feet and moderate benign enlargement of the prostate. X-ray of the chest showed large calcifications in the hilar regions with fibrosis of the left costophrenic angle. These changes were considered chronic in nature. The lungs were expanded. The heart was normal in size. Complete blood count showed hemoglobin of 14.5 grams; hematocrit 33.4%, white cell count 11,200. CPK was 44. Serum electrolytes were all within normal limits and SMA 12 was all within normal limits. Electrocardiogram showed left axis deviation and strain pattern, probable digitalis effect.

"He underwent emergency operation for his strangulated hernia under general anesthesia, given by Rufus Casey, RNA. The findings were: Straw colored fluid, foul smelling in the sac with three loops of small bowel, purple with black patches, adherent to the sac with one another. There were also intermesenteric adhesions. After giving the patient oxygen and using hot saline soaks, the viability of the bowel was recovered and it turned pink with good peristalsis. Contents were then returned into the abdominal cavity after lysis of adhesions. The hernia repair was done with Bassini's method. A reasonably good repair was done despite many attenuated unidentifiable structures.

"Postoperatively, Mr. Freeland was ambulated quickly to avoid postural pneumonia. His postoperative period was uneventful and he was allowed to go home in eight days, walking. The wound was healed well with no sign of infection.

"Mr. Freeland is well and happy at his home in Nimitz, West Virginia. He will celebrate his 102nd birthday February 15, 1977."

Buford W. McNeer, M. D.
Chandra P. Sharma, M. D.
Mousa I. Dababna, M. D.
Hinton, West Virginia

GENERAL NEWS

Olympic Gold Medal Winner Honor Guest At Annual Meeting

A Boston surgeon who was the first American to win the Olympic Gold Medal in women's figure skating in 1956 will be an honor guest at the Association's 109th Annual Meeting which will be held at The Greenbrier in White Sulphur Springs August 18-21.

Dr. Robert D. Hess of Bridgeport, Chairman of the Program Committee, announced that Dr. Tenley E. Albright has accepted an invitation to be the keynote speaker at the first general session on Thursday morning, August 19. Doctor Albright, also the first American woman to win the World Figure Skating Championship in 1953, will deliver "The Thomas L. Harris Address" which was established with a bequest in the will of the late Dr. Thomas L. Harris.

Doctor Harris, Parkersburg surgeon who served as President of the State Medical Association in 1945, established the trust fund in an effort to enhance the quality of the programs for future annual meetings of the Association.

Tenley E. Albright, M. D

"We are delighted to have Doctor Albright, an individual of uncommon achievement, as our honor guest in this Olympic year," Doctor Hess commented.

Doctor Albright, mother of three, practices surgery in Boston in association with Dr. Hollis L. Albright, her father, and Dr. Nile L. Albright, her brother. After attending Radcliffe College in Boston for three years, she went directly to Harvard Medical School, where she received her M. D. degree in 1961.

She served a surgical residency at Beverly (Me.) Hospital and a preceptorship with her father.

Doctor Albright, who also won the World Figure Skating Championship in 1955 as well as 1953, was National Champion from 1952 through 1956. She currently is a member of the Executive Committee of the U. S. Olympic Commitee, and has maintained continuing interest and activity in sports through a variety of other appointments and memberships. Some of these include:

The Athletes Advisory Council and the Medical Advisory Committee of the U. S. Olympic Committee, the U. S. International Olympic Academy, President's Council on Physical Fitness and Sports, American College of Sports Medicine, Medical Consultant to the National Trainers Association, Consultant to the New York State Public High School Athletic Association, Medical Consultant to Ice Skating Institute of American Handicapped Program, and Founding Member of Sports Medicine Resources.

She also is a member of the Board of Directors of the American Cancer Society, a Life Member of the NAACP, and Honorary President of the Campfire Girls Council for Greater Boston.

Doctor Albright is the recipient of a number of honorary degrees and citations, including:

Doctor of Science, Hobart & William Smith Colleges (1965), Geneva, New York; Doctor of Humanities, New England School of Law (1975), Boston; Ice Skating Institute of America Hall of Fame (1947); American Academy of Achievement Honoree (1976); U. S. Figure Skating Association Hall of Fame (1976); and Emanuel College (Distinguished Bostonian), 1976.

A complete summary of annual meeting activities and the program planned by the Woman's Auxiliary to the State Medical Association will appear in the August *Journal*.

Council Touches Many Bases At May 16 Meeting

Here are excerpts from minutes of the May 16 meeting of the State Medical Association's Council, designed to cover the more important actions taken and subjects considered:

The Spring Meeting of the Council was convened at Holiday Inn No. 1 in Charleston at 10 A. M. on Sunday, May 16, with Dr. William E. Gilmore of Parkersburg, Chairman, presiding.

Also present at the meeting were Dr. Jack Leckie of Huntington, President; Dr. Joseph A. Smith of Dunbar, Vice President; Dr. A. Thomas McCoy of Charleston, Councilor at Large; Dr. Worthy W. McKinney of Beckley, Junior Councilor; and these Councilors: Drs. Robert R. Weiler of Wheeling; Robert J. Nottingham of Morgantown; L. Walter Fix of Martinsburg; Robert D. Hess of Bridgeport; Louis W. Groves, Jr., of Richwood; Lyle D. Vincent of Parkersburg; W. Alva Deardorff and J. L. Mangus of Charleston; Walter E. Kingensmith of Beckley; and David F. Bell, Jr., of Bluefield; along with Charles R. Lewis, Executive Secretary, Mr. Custer B. Holliday, Executive Assistant, and Mrs. Mary W. Hamilton, Administrative Assistant, Association staff members.

Also attending the meeting were Dr. Frank J. Holroyd of Princeton, AMA Delegate; Dr. Harry S. Weeks, Jr., of Wheeling, AMA Alternate; Dr. N. H. Dyer of Charleston, Director of the State Health Department; Dr. Charles W. Merritt of Beckley, Co-Chairman of the Association's Legislative Committee; Dr. Albert C. Esposito of Huntington, a member of the West Virginia House of Delegates; Dr. R. L. Anderson of Charleston; Drs. Alfred J. Magee, Robert E. O'Connor and Moseley H. Winkler of Charleston; Dr. Richard C. Rashid of South Charleston; Drs. Robert L. Dunworth, James R. Cook and Mario C. Korstanje, Jr., of Huntington; Mr. Warren Magee of Washington, D. C., General Counsel for the American Association of Ophthalmology; and Mrs. J. L. Mangus of Charleston, President Elect of the Woman's Auxiliary to the State Medical Association.

New Council Member

Doctor Gilmore noted the appointment by Doctor Leckie of Dr. Joseph T. Mallamo, Fairmont surgeon, to the Council for the unexpired portion of the term of Dr. Robert G. Janes, also of Fairmont, who resigned in January. Doctor Mallamo will represent the Second Councilor District including Marion and Wetzel Counties until the annual election of Councilors at The Greenbrier in White Sulphur Springs in August.

Election of Honorary Members

On Motion by Doctor Fix, seconded by Doctor Bell, Council elected to Honorary Membership the following physicians who have been accorded similar status by their county medical societies:

Name	*Address*	*Society*
John E. Stone	Huntington	Cabell
S. L. Bivens	Charleston	Kanawha
Thomas G. Reed	Charleston	Kanawha
Frederick C. Reel	South Charleston	Kanawha
John Hudson Robinson	South Charleston	Kanawha
Thomas V. Shiels	South Charleston	Kanawha
Norvell L. Haislip	Wheeling	Ohio
John H. Murphy	Wheeling	Ohio
William R. Yeager	Parkersburg	Parkersburg Academy
Donald M. Burke	Elkins	Tygart's Valley

Approval of Active Member - Dues Exempt Status

On motion by Doctor Vincent, seconded by Doctor Smith, Council elected to "active member-dues exempt" status the following physicians who have qualified under provisions of the Association's By-laws:

Name	*Address*	*Society*
John J. Brandabur	Huntington	Cabell
W. Paul Elkin	Charleston	Kanawha
W. Owen McMillan	Charleston	Kanawha
Howard A. Swart	Charleston	Kanawha
John F. Stecker	Morgantown	Monongalia
Charles I. Rogers	Fayetteville	Fayette

All of the above named physicians are semi-retired and/or in limited practice with the exception of Doctor Rogers, who is beginning a residency in radiology at the Medical University of South Carolina in Charleston on July 1, 1976.

Financial Report

The Council reviewed a detailed financial statement presented by Mr. Lewis on behalf of Dr. Kenneth G. MacDonald, Association Treasurer, covering the State Medical Association's receipts and disbursements for the January-March quarter of the 1976 calendar and budget year. Mr. Lewis submitted the report with some additional financial data, including a May 13 Association checking account balance of $133,161.27 and a savings account balance of $89,370.38. Mr. Lewis reported a transfer of $52,000 from the checking to the savings account in April, and asked for some Council guidance in continued transfer procedures in order that the Association might earn interest on operating funds not yet required for disbursement.

Council informally instructed the Treasurer and the Executive Secretary to follow a procedure of keeping approximately $30,000 in the checking account on an ongoing basis, with any amounts above that figure to be on deposit in the regular savings account.

Mr. Lewis reported that a November 25, 1975, assessment of $10 of Medical Association members to establish a Professional Liability Education Fund found, as of May 13, payments from 752, or about 43 per cent, of the 1,730 physicians billed.

On motion by Doctor McKinney, seconded by Doctor Klingensmith, Mr. Lewis was instructed to

re-assess those members who have not responded; and to quote appropriate Bylaws provision making such payments mandatory for continued membership in the Association.

State-AMA Membership Totals

As a matter of information, Mr. Lewis reported that, as of May 13, 1,562 Association members had paid 1976 State dues, an increase of more than 200 over the 1,336 to the same date in 1975. As of May 13, 1,121, or 71 per cent of those paying State dues, also had paid AMA dues this year. To the same date in 1975, when AMA dues were $110 as compared to $250 for 1976, 1,153, or 86 per cent of those paying State dues, also had paid AMA dues.

Endorsement of Physician Requests

On motion by Doctor Klingensmith, seconded by Doctor Vincent, Council approved interim action by Doctor Leckie, on behalf of the Executive Committee, endorsing two applications to the National Health Service Corps for assignment of physicians to the State. Both applications also received appropriate endorsement by component medical societies. One application by Valley Health Systems in Huntington sought the assignment of two physicians in the Ceredo and Kenova areas in Wayne County. The other request by the Valley Comprehensive Community Mental Health Center asked for a psychiatrist for the Monongalia-Marion-Preston-Taylor County areas served by the Center.

Contribution to WVU Representative Toward Student American Medical Association Meeting Expenses

On motion by Doctor Smith, seconded by Doctor Mangus, the Council approved interim action contributing $200 to Joseph C. Franz, President of the West Virginia University Chapter of the Student American Medical Association, toward his expenses to the AMSA Convention in New Orleans, March 4-7, 1976.

Contribution To Woman's Auxiliary

The Council, on motion by Doctor Bell, seconded by Doctor McKinney, voted to provide the Woman's Auxiliary to the West Virginia State Medical Association $1,750 toward expenses of the Auxiliary's Annual Convention, August 18-21, at The Greenbrier in White Sulphur Springs.

Medical Golf Tournament

Approved, on motion by Doctor Smith, seconded by Doctor Vincent, was an allocation of $300 for the Medical Golf Tournament to be held during the Association's August 18-21 Annual Meeting at The Greenbrier.

The allocation was provided for the purchase of Tournament prizes with the understanding that the Association would be reimbursed from funds collected from the registration fee.

Chiropractic Litigation

Mr. Lewis reported that litigation continued in a restraint of trade suit brought against a number of medical service plans in West Virginia, physician members of boards of those plans and the West Virginia State Medical Association. Chiropractors who were plaintiffs in the action carried to the U. S. District Court of Appeals in Richmond an appeal from a U. S. District Court order first dismissing the State Medical Association as a defendant and then dismissing the complaint itself. Oral arguments at the District Court of Appeals level were held in Richmond on April 9, with no order entered as of this date (May 16) in the appeal.

Legislative Activity and Review

The Council engaged in a long review of activity during the 1976 regular session of the Legislature which was adjourned on Saturday, May 15. Guests during much of the discussion included representatives of the West Virginia Academy of Ophthalmology and Otolaryngology and Mr. Warren Magee of Washington, D. C., General Counsel of the American Association of Ophthalmology.

Mr. Magee reviewed in detail the features and implications of a 1976 act broadening the definition of optometry in West Virginia and, among other things, authorizing optometrists to use diagnostic and therapeutic drugs, through topical application to the anterior segment of the eye. On motion by Doctor McKinney, seconded by Doctor Klingensmith, the Council approved action by the West Virginia State Medical Association as a co-plaintiff in litigation which might be instituted by the ophthalmologists with respect to the optometry act. Doctor McKinney noted no initial financial commitment would be sought from the Medical Association, but that a request for such help might come later.

With regard to overall increasing legislative and political challenges facing the State Medical Association, Council adopted a motion by Doctor Deardorff, seconded by Doctor Weiler, calling for the appointment of an Ad Hoc Committee to consider the need for additional State Medical Association personnel for political and legislative purposes; how and what duties should be assigned to such personnel, and means of funding such additional activity, including possible resources from component medical societies. The Ad Hoc Committee, to be composed of Doctors John J. Mahood, President-Elect; Holroyd, and Merritt, was instructed to meet within a period of two to three weeks and report back to the Executive Committee with recommendations.

Health Systems Agency Status Report

Doctors Leckie and Mangus brought the Council up to date on continued efforts to develop the Health Systems Agency under provisions of the National Health Planning and Resources Development Act of 1974. Doctor Leckie explained that

efforts by the present HSA Board were continuing to revamp an HSA application for the State initially rejected by Federal representatives, and to obtain funding by June 30, 1976. Doctor Mangus explained new developments toward establishment of a permanent HSA Board; and expressed concern that adequate physician representation might be a problem.

Medical Institute Status Report

Doctor Weeks, as President of the West Virginia Medical Institute, Inc., reported that the Institute, as the Professional Standards Review Organization for West Virginia, was maintaining a developmental pace which compared favorably to that in other states. His report indicated that the Institute hoped to have Professional Review authority delegated to 17 hospitals in the State within two weeks, and to 51 hospitals by mid-May 1977.

Employee Benefit Plan Administrator Named

In line with the Federal Pension Reform Act, and on motion by Doctor Mangus, seconded by Doctor Bell, Council formally approved the appointment of Doctor MacDonald as Plan Administrator for the Medical Association's Employee Benefit Plan.

Flu Vaccine

Doctor Dyer outlined preliminary plans for a state-wide inoculation program this year against Swine Influenza. He noted that the first vaccine expected to arrive in West Virginia by mid-summer would contain both the Victoria and Swine strains; and that the first group to be inoculated would include those 65 years of age and over along with persons suffering from chronic chest diseases. Doctor Dyer said physicians would be kept informed relative to availability and transportation of the vaccine; and that it would be given in physicians' offices as well as through various school, industrial and other clinics and county health departments. Mr. Lewis called the Council's attention to an Amercan Medical Association's recommendation that state and county medical societies cooperate actively in the inoculation effort.

Medicaid Reimbursement Planning

Doctor Mangus updated the Council on continued efforts to improve medical and dental payment levels under the Medicaid program administered by the State Department of Welfare for which he serves as Medical Director. He called particular attention to Department concern about a legislative appropriation it felt was $3.5 million in State money short of actual Medicaid needs. Since 71 per cent of Medicaid Funds come from Federal sources on a matching basis, Doctor Mangus said, the State appropriation shortage actually represented $10 million in Medicaid program needs.

Executive Secretary's Report

Mr. Lewis touched on these items in his Executive Secretary's report:

(1) The Medical Economics Sub-Committee on Workmen's Compensation, supplemented by additional physicians from a number of specialties, had a scheduled meeting May 26 with Workmen's Compensation Commissioner B. Frederick Becker and his staff to work on continued development of standard forms for evaluation of physical impairment under the Compensation program.

(2) Development and activity of physician review panels set up under the Medical Association's group professional liability insurance program with Aetna Life & Casualty Company were progressing satisfactorily with four case reviews held since January 1 and several others scheduled.

(3) An additional meeting of the Medical Association's Medical Scholarships Committee, which interviewed 18 students in Morgantown May 1-2, will be necessary because of some delay in completing the first-year class of 88 scheduled to enter the West Virginia University Medical School this fall. (The second meeting to interview additional applicants for the four Medical Association scholarships to be awarded first-year students later was set for Saturday, June 5, in Charleston.)

Mr. Lewis noted that the annual cost of medical scholarships to the Association will reach $16,000 in 1977, as compared to $8,000 when the Association awarded only two scholarships prior to 1974. He suggested that the House of Delegates might want to amend the Association Bylaws this year to increase the $6 allocation from members' annual dues to the Scholarship Fund. Doctor McKinney recommended that an appropriate amendment to the Bylaws be ready for Council consideration at its Pre-Convention Meeting in White Sulphur Springs on August 18.

(4) Mr. Lewis outlined an INTRAV proposal for a two-week South American Adventure to Lima, Peru; Rio de Janeiro in Brazil and Caracas in Venezuela with tentative dates in early January or late March of 1977. On motion of Doctor McKinney, seconded by Doctor Deardorff, the Council endorsed the trip for members of the State Medical Association and their families. Administrative expenses related to promotion of the Adventure by the State Medical Association will be paid by INTRAV.

(5) Continuing Medical Education programs of three more hospitals and a specialty society have been accredited or re-accredited by the Association's Committee on Medical Education and Hospitals, with at least two additional surveys to be scheduled in the near future.

Medical Education Requirements

At the request of Doctor Gilmore, Council directed Doctor Leckie to appoint a Committee to look into the feasibility of developing medical education requirements either for continuing membership in the Medical Association, or for re-licensing in West Virginia.

AMA Chief Weirton Recognition Dinner Guest, Speaker

Dr. Max H. Parrott, immediate Past President of the American Medical Association, was the guest of honor and principal speaker during the Fourth Annual Family Physicians Recognition Dinner held in Weirton in May.

Max H. Parrott, M. D.

Approximately 250 members of the Weirton medical community were present for the annual event, which was sponsored by the Department of Family Practice of Weirton General Hospital.

Dr. Richard E. Flood of Weirton, a Delegate of the State Medical Association to the AMA, introduced Doctor Parrott and served as his host during his visit in Weirton.

Doctor Parrott, whose Weirton appearance was prior to the expiration of his term in June as AMA President, also addressed nursing students at the West Virginia Northern Community College in Weirton during his visit, and was interviewed at a news conference immediately prior to the dinner.

During the banquet, Doctor Parrott was presented a plaque for his contribution to the field of health care on a national level. He also was awarded an honorary degree from the West Virginia Northern Community College by Dr. Daniel B. Crowder, President.

Edwin F. Flowers of New Cumberland, a Justice of the West Virginia Supreme Court of Appeals, received an award for his contribution to health care on the State level; and the Weirton Area Ambulance and Rescue Squad was cited for its contributions on the local level.

Dr. Thomas J. Beynon, Medical Director of Weirton General Hospital, was master of ceremonies for the event.

Doctor Parrott issued a call for a return to reason in government regulation of medical services during his dinner remarks.

WVU Medical Library Providing Copy, Search Services

The West Virginia University Medical Center Library has announced it is now providing free photocopies of health science journal articles to any hospital in the State needing this service. The library also provides, free of charge, computerized literature searches of the Medline data base. This data base contains approximately 750,000 journal articles from 3,000 medical journals going back three years.

The medical center library is now providing this service within three days after receipt of the request.

Requests for either free photocopy service or Medline searches should be directed to: Medical Center Library, Attn.: Interlibrary Loan, West Virginia University, Morgantown 26506.

Comments and complaints regarding the above services may be made directly to Robert L. Murphy, Director of the medical center library (Phone 293-2113).

Principals at the Fourth Annual Family Physicians Recognition Dinner held in Weirton in May were, seated (from left), Drs. Richard E. Flood of Weirton; Max H. Parrott, Portland, Oregon, immediate Past President of the American Medical Association; Thomas J. Beynon, Weirton; and Eli J. Weller, Chairman of the sponsoring Department of Family Practice at Weirton General Hospital. Standing are (from left), Robert Keller, President of the hospital's board of trustees; John B. Stankiewicz, award recipient, Chief of Operations of the Weirton Area Ambulance and Rescue Squad; Dr. George S. Kosar, President of the Hancock County Medical Society; Edwin F. Flowers, award recipient and a Justice on the West Virginia Supreme Court of Appeals; Dr. Daniel B. Crowder, President of West Virginia Northern Community College; and Dr. Myer Bogarad, who is Hancock County's longest-practicing physician.

Ambulatory Care Center Acquired By Marshall U. Corporation

A new non-profit corporation was to acquire Doctors Memorial Hospital in Huntington on July 1 and will operate it as an ambulatory care center for the community, Marshall University President Robert B. Hayes announced. The facility will be closely related to the Marshall Medical School.

At the same time, Doctor Hayes said the Marshall University Foundation has agreed to launch a fund-raising campaign to assist the new corporation in purchasing and renovating the hospital, as well as helping provide a cash-flow reserve for its operation.

The new corporation, Family Care Outpatient Center, Inc., was chartered May 13 with four Marshall officials as the initial board of directors.

The property at 1801 Sixth Avenue is being purchased from Clifton Forge-Huntington Hospitals, Inc. The final cost to the new corporation will be determined by several factors involved in a complex set of conditions included in the agreement. However, it will be less than $500,000, Doctor Hayes said.

Inpatient services will not be provided by the new operation. Plans call for expanding the existing outpatient clinic into a major ambulatory care center.

"While Marshall University's Medical School will be closely identified with this facility, it will be a community project designed to benefit the people of the entire region," Doctor Hayes said.

Acquisition of the building for use as a community-based facility was made possible by the Chesapeake and Ohio Railway Employees' Hospital Association, a major participant in the Clifton Forge-Huntington Hospitals, Inc., organization, he continued. "The Association is concerned about continued provision of ambulatory care services for its members and its leaders feel the type of service planned by Family Care Outpatient Center, Inc., will provide a better quality of care than might be possible otherwise."

Doctor Hayes said some of the space in the building will be leased to the Marshall Medical School and the ambulatory care center will provide educational opportunities for medical school students. In addition, the facility will serve as a center for clinical practice for members of the medical school faculty.

The Medical School currently leases the fifth floor of the hospital for offices.

President Hayes said acquisition of the building by the new corporation had been endorsed by Marshall's Advisory Committee on Medical Education, which includes representatives of the local medical community, the two major city hospitals, and the Veterans Administration Hospital. "In fact," he said, "it was the Advisory Committee on Medical Education which requested that a subcommittee be formed to study and develop a plan for acquiring the facility."

The formation of a separate corporation with wide community participation was based on a decision to limit the medical school to health education and not have it directly involved in health delivery services, he added.

The four incorporators are Dr. Olen E. Jones, Jr., President; Paul H. Collins, Vice President; Joseph C. Peters, Secretary and Treasurer, and Dr. George J. Hill. Doctor Jones is Marshall Executive Vice President; Collins is Executive Assistant to President Hayes for Medical School Affairs; Peters is Marshall Vice President for Business Affairs; and Doctor Hill is Chairman of the medical school's Department of Surgery and Associate Dean for Clinical Affairs.

Conditions of the transaction were approved by the Board of Directors of Clifton Forge-Huntington Hospitals, Inc., at its Spring meeting in Clifton Forge, Virginia.

Under the agreement, the four physicians now employed in the hospital's successful outpatient clinic will continue for the remaining portions of their contracts. To the extent of need, current qualified employees of the hospital will be retained for the ambulatory care center operation. Initial placement assistance will be provided those not retained.

Continued outpatient clinic service will be provided members of the C&O Employees' Hospital Association at a favorable rate. Association members currently make up a major portion of the present hospital outpatient clinic's patient load.

Other items in the agreement deal with outstanding patient accounts receivable, and purchase of certain non-obsolete supplies. The new corporation also will have the right, but not the obligation, to purchase items of furniture and equipment currently used in the Doctors Memorial Hospital operation.

President Hayes said the agreement worked to the advantage of both parties, inasmuch as it provides for continuing services to C&O Employees' Hospital Association members, allows Clifton Forge-Huntington Hospitals, Inc., to dispose of the property without suffering a financial loss, and permits the community to acquire an important health care delivery facility at a reasonable figure.

"All of us involved in this development are tremendously pleased that it has come about," Doctor Hayes said. "It will provide a major, greatly-needed health care delivery service to the people of the region and, along with the local hospitals, the ambulatory care center will become an essential part of the community-based school of medicine educational program."

Medical Association Announces Winners of Scholarships

Four young men from widely scattered parts of the State have been awarded four-year scholarships by the West Virginia State Medical Association to the West Virginia University School of Medicine.

Dr. Martha Jane Coyner of Harrisville, Chairman of the Association's Committee on Medical Scholar-

Randal E. White

Daniel P. Harrington

ships, announced these winners who will receive $1,000 grants for each of their four years in medical school:

Randal Earl White of Gilbert in Mingo County; Daniel Phillip Harrington of Beckley; John David England, now a Morgantown resident; and Raymond Bruce Henthorn of Paden City, Wetzel County.

Each of the four has been accepted by the WVU School of Medicine, and will begin studies this fall leading to an M. D. degree. The scholarships bring to 40 the number awarded by the Medical Association to deserving students since it started its program in 1958.

White, the son of Mr. and Mrs. Herbert E. White of Gilbert, received a Bachelor of Science Degree in Zoology, with a minor in Chemistry, from Marshall University this Spring.

Harrington received a degree from WVU's School of Pharmacy in 1975, and currently is employed in

John D. England

Raymond B. Henthorn

the Beckley area. He is the son of the late Francis J. Harrington of Beckley, and Mrs. Harrington.

England compiled a 3.96 point average while completing work at WVU this Spring on a B. A. Degree in Chemistry. He is a Clarksburg native, and the son of Mr. and Mrs. John D. England, who now reside in Vero Beach, Florida.

Henthorn, who received a B. A. Degree in Biology, Physics and Chemistry from WVU this Spring, is the son of Mr. and Mrs. H. Victor Henthorn of Paden City.

Until 1974, the Medical Association awarded two scholarships annually. It then increased the number to four with an objective of encouraging greater numbers of young physicians to establish their practices in West Vriginia.

Under provisions of its scholarship agreement, recipients must agree to practice in West Virginia for four years following graduation and completion of postgraduate training and military obligations.

The Scholarship Committee conducted interviews of applicants from among this fall's first-year WVU School of Medicine class in Morgantown on May 1-2, and in Charleston on June 5.

Committee members in addition to Doctor Coyner are Drs. R. L. Chamberlain of Buckhannon; Marshall J. Carper, Russel Kessel and Arthur L. Poffenbarger, all of Charleston; Robert D. Hess of Bridgeport; Thomas J. Holbrook of Huntington; John Mark Moore of Wheeling, and Clark K. Sleeth of the WVU Medical Center in Morgantown.

Postgraduate Session Of Tygart's Valley Society Held In June

The 27th annual Postgraduate Session of the Tygart's Valley Medical Society was held on June 17 in Elkins.

The speakers and their topics for the scientific program, all from the West Virginia University School of Medicine, were "Short Stature Assessment and Management"—J. Darrell Smith, M. D., Professor of Pediatrics (Endocrinology); "Early Detection of Cervical Neoplasia"—C. Josh Tunca, M. D., Assistant Professor, Department of Obstetrics and Gynecology; and "The Annual Physical Examination"—W. K. C. Morgan, M. D., Professor and Chairman of Pulmonary Diseases, Department of Medicine.

Dr. Harold L. Jellinek of Elkins was Chairman of the Scientific Program Committee.

Dr. Gene W. Harlow of Grafton, Society President, welcomed guests to the banquet, which featured addresses and entertainment on the bicentennial theme.

A golf tournament in the morning rounded out the day's activities.

Huntington Urology Seminar Planned In October

A Seminar on Urinary Tract Infections will be held on Saturday, October 16, in Huntington at the Downtown Holiday Inn. The sponsors will be Saint Mary's Hospital and the Marshall University School of Medicine.

Members of the faculty will be Drs. Victor A. Politano, Chief, Division of Urology, Jackson Memorial Hospital, Miami, Florida; Stanley J. Kandzari, Associate Professor, Division of Urology, West Virginia University Medical Center; and Maurice R. Mufson, Chief of Medicine, Marshall University School of Medicine.

The program will begin with registration at 8 A. M. and continue through 12:30 P. M., followed by an optional buffet luncheon and attendance at the Marshall University homecoming game.

The Program Director will be Dr. Rafael E. Molina, Huntington urologist.

The seminar has been approved for three hours of credit in Category 1 of the Physician's Recognition Award of the American Medical Association; and application has been made for three hours of Elective credit by the American Academy of Family Physicians, and for three hours of CERP by the West Virginia Nurses' Association.

The fee for physicians will be $20 ($25 after October 1) and $10 for allied health personnel ($15 after October 1). Fees for the optional buffet luncheon and homecoming game will be $8.20 and $5 per person respectively. Checks should be made payable to the Department of Continuing Medical Education, Saint Mary's Hospital. Registrations and checks may be sent to: Saint Mary's Hospital, Department of Continuing Medical Education, 2900 First Avenue, Huntington 25701. For further information contact the hospital at the above address or phone (304) 696-2298.

The complete seminar program will be listed in a future issue of *The Journal.*

Ophthalmologists, Otolaryngologists Elect New Officers

Dr. Richard D. Richmond of Beckley was elected President of the West Virginia Academy of Ophthalmology and Otolaryngology at its Spring meeting at The Greenbrier in White Sulphur Springs.

Other new officers are: Drs. T. F. Hall II of Fairmont, Vice President; J. Elliott Blaydes, Beckley, Secretary-Treasurer; and William C Morgan, Jr., Charleston; Albert C. Esposito, Huntington, and Philip M. Sprinkle, Morgantown, Directors.

Doctor McConnell New Fellow

Dr. Lewis H. McConnell of Charleston has been elected to fellowship in the American Academy of Allergy. Doctor McConnell is in private practice in Charleston and also is an assistant clinical professor at the West Virginia University School of Medicine.

Recently elected officers of the West Virginia Chapter, American College of Surgeons, are (from left), Dr. Alvin L. Watne, Morgantown, Secretary-Treasurer; Dr. Fernando Giustini, Wheeling, Second Vice-President; Dr. Alfred Ghaphery, Wheeling, President; Dr. William Lawton, Charleston, Immediate Past President; and Dr. William E. Gilmore, Parkersburg, Governor. Dr. Robert Gardner, Morgantown, is First Vice-President. The West Virginia Chapter has 169 active members and holds regularly scheduled meetings in the fall at Morgantown and in the spring at The Greenbrier, White Sulphur Springs.

Wheeling Clinic Plans Scientific Conference For October

A two-day scientific meeting, "Update '76," will be held by the Wheeling Clinic on October 8 and 9 at Oglebay Park in Wheeling. There will be discussion in a wide range of medical disciplines, with lectures presented by staff members of the Wheeling Clinic and guest speakers.

The program will include general sessions, sessions on family practice and internal medicine, and workshops on psychiatry-neurology, dematology, thoracic medicine and surgery, obstetrics and gynecology, and surgery.

Guest lecturers will be Drs. John W. Traubert, Chairman, Department of Family Practice, West Virginia University School of Medicine; Dr. Frank Ayd, President of the American Psychiatric Association and Chief of Psychiatry at Franklin Square Hospital in Baltimore; John H. Scott, Medical Director, School of Respiratory Therapy, West Penn and Mercy hospitals, Pittsburgh.

Richard Bodzian, Professor of Medicine and Director, Division of Nutrition, University of Cincinnati College of Medicine; Theodore H. King, Professor and Director, Department of Obstetrics and Gynecology, Johns Hopkins Hospital, Baltimore; William E. Anderson, Professor of Medicine, WVU; and Anthony G. DiBartolomeo, Professor of Medicine, WVU.

The conference has been approved for credit in Category 1 of the Physician's Recognition Award of the American Medical Association—and for 12 hours of Prescribed Credit by the American Academy of Family Physicians.

David Brinkley, NBC news analyst and anchor man, will be the special guest speaker during the dinner session on Saturday evening, October 9.

The physician registration fee will be $50. Additional program details will be listed in future issues of *The Journal.*

Heart Assn. Receives Donation From Baking Company

The West Virginia Affiliate of the American Heart Association has benefited from a recent promotional campaign conducted by a major Parkersburg baking firm. The Storck Baking Company's $1,098 contribution was realized during a two-week sale of special loaves of bread in nine West Virginia counties.

Charles E. Sikorski, Executive Director of the West Virginia Heart Association, said the Storck firm donated five cents from each loaf of bread it sold during the Heart Month drive. "This is an excellent example of teamwork between private business and charitable organizations such as the Heart Association," he said. "We welcome more community minded firms to follow the Storck Company's example."

Medical Meetings

Aug. 1-7—Am. Institute of Uutrasound in Medicine, San Francisco.

Aug. 4-6—Am. Academy of Clinical Toxicology, Seattle.

Aug. 7—Ob-Gyn Day (Wheeling Div., WVU), Wheeling.

Aug. 17-20—International Society for Experimental Hematology, Washington, D.C.

Aug. 18-21—109th Annual Meeting, W. Va. State Medical Assn., White Sulphur Springs.

Sept. 9-11—Am. Assn. of Obstetricians & Gynecologists, Hot Springs, Va.

Sept. 15-17—Pa. Medical Society, Philadelphia.

Sept. 16-17—Hal Wanger Family Practice Conference, Morgantown.

Sept. 16-18—Medical & Chirurgical Faculty of the State of Md., Annapolis.

Sept. 23—Pediatric Day (Wheeling Div., WVU), Wheeling.

Sept. 20-23—AAFP, Boston.

Sept. 21-24—Am. Roentgen Ray Society, Washington, D. C.

Sept. 26-30—Kentucky Med. Assn., Louisville.

Oct. 6-9—Maryland Medical Staff Conference, White Sulphur Springs.

Oct. 6-10—Am. Academy of Ophthal. & Otolaryn., Las Vegas.

Oct. 8-9—Update '76 (Wheeling Clinic), Wheeling.

Oct. 9-14—Indiana State Medical Assn., Indianapolis.

Oct. 11-15—ACS, Chicago.

Oct. 11-16—Am. College of Emergency Physicians, New Orleans.

Oct. 16—Seminar on Urinary Tract Infections, Huntington.

Oct. 16-17—Am. College of International Physicians, Inc., Chicago.

Oct. 16-21—Am. Academy of Pediatrics, Chicago.

Oct. 24-26—Medical Society of the District of Columbia, White Sulphur Springs.

Oct. 24-28—Am. College of Chest Physicians, Atlanta.

Nov. 4-7—Medical Society of Virginia, Williamsburg.

Nov. 7-10—Southern Medical Assn., New Orleans.

Nov. 15-19—Am. Heart Assn., Miami Beach.

Dec. 4-8—AMA Clinical, Philadelphia.

1977

Jan. 28-30—Tenth Mid-Winter Clinical Conference, Charleston.

The West Virginia Medical Journal

Vol. 72, No. 8 August, 1976

Pelvic Pneumogynecography

Fernando G. Giustini, M. D.

Abstract

The occasional encounter with a patient between the ages of 16 and 24 with a history of pelvic exploratory laparotomy for obscure pelvic pain and the frequent presentation of a patient with an infertility problem who has undergone an exploratory laparotomy as the first approach to the investigation of her infertility led me to present this study on pelvic pneumoperitoneum.

It is obvious, even to the most casual observer, that recent advances in laparoscopy limit the use of pneumogynecography in today's gynecological practice. As a matter of fact, since our implementation of pelvic endoscopy a few years ago, I have performed few studies with pelvic pneumoperitoneum; however, I have chosen to present this material so that in those institutions where laparoscopy is not available, and when the patient cannot be referred to a laparoscopist, the practicing physician might avail himself of this most important modality of gynecological investigation.

Definition and Historical Background

Artificial pelvic pneumoperitoneum has been been referred to by some authors as "gynecography"; however, this is a misnomer because gynecography is intended to include two methods of radiographic study of the pelvic organs: hysterosalpingography and artificial pelvic pneumoperitoneum.

In 1902, Kelling, for the first time, injected air into the abdominal cavity in order to obtain a more adequate visualization of its organs during endoscopic examinations. Jacobaeus[1] then established the safety of the procedure by demonstrating that a trocar could be pushed through the wall of the abdomen of a cadaver without damaging the intra-abdominal organs.

The Author

- **Fernando G. Giustini, M. D., from the Department of Obstetrics and Gynecology, Ohio Valley Medical Center, Wheeling, West Virginia.**

Weber[2] was the first to use pneumoperitoneum in association with roentgenological examinations and Lorey[3] was among the first to use it as a diagnostic tool in cases of ascites. Goetz[4] showed its safety and its unquestionable diagnostic value. Pneumoperitoneum was introduced into the United States by Stewart and Stein.[5]

Modifications in the use of this procedure were proposed by Alvarez,[6] who introduced the use of carbon dioxide instead of oxygen, and Rubin,[7] who pointed to the transuterine route for the introduction of gas into the peritoneal cavity. In 1921, Peterson[8] described a definite technique[8] stressing the importance of positioning the patient and the sterility of the method by culturing gas removed from the peritoneal cavity after the initial injection.

Stein[9] proposed the combined use of hysterosalpingography and pneumoperitoneum. Other investigators stressed the importance of pneumoperitoneum in pediatric gynecology while others emphasized and stressed the use of cul-de-sac puncture in obtaining artificial pneumoperitoneum.

Indications and Contraindications

A review of the literature recommends the use of pneumogynecography in patients with the following indications:

1. Sterility, infertility or habitual abortions.
2. Questionable ovarian mass.
3. A gynecological patient in whom a satisfactory pelvic examination cannot be carried out because of virginity, obesity, or severe pelvic pain that would not permit the outlining of the pelvic organs.
4. A large pelvic mass wherein a differential diagnosis between ovarian and uterine pathology cannot be established by means of pelvic examination.
5. Suspected congenital anomaly of the pelvic reproductive system.
6. A difference of opinion between two or more examiners.
7. Previous pelvic surgery with uncertainty of the type of surgery performed.

In addition to the above, which are the more important indications, it is of interest to point out that this procedure has been used on patients with carcinoma of the cervix in order to better estimate the extent of the lesion within the pelvic cavity.

The contraindications of pneumogynecography which are stressed in the literature are:

1. Advanced age of the patient with or without poor cardiac status.
2. Local or diffuse peritonitis.
3. A mass completely filling the abdomen and the pelvis.

Complications

In most patients, the complications of pneumoperitoneum are limited to occasional nausea, vomiting and shoulder pain. The procedure as such should give little discomfort except for minimal cramping and shoulder pain. It has been my experience that when patients complain of severe pain it is almost always a sign that the gas is being introduced in spaces other than the peritoneal cavity. In obese patients it is possible to underestimate the thickness of the abdominal wall and thus inject the gas between the layers of the abdominal wall. This can be easily recognized by the typical emphysematous infiltration of the injected tissues.

In the thin patient it is possible to overestimate the thickness of the abdominal wall and thus inject the gas extraperitoneally. This is easily recognized when the patient experiences severe pain radiating down to the lower extremities and upward along the back.

Two other possible complications are perforation of the bowel and perforation of the large blood vessel. The first of these can be avoided by keeping away from surgical scars. The second commonly results from miscalculation of the thickness of the abdominal wall. In these patients the needle may not only pierce the abdominal wall but extend through the abdominal cavity to the posterior peritoneum, thus entering one of the large blood vessels of the pelvis. The perforation of a blood vessel is a calculated risk but its consequences are minimal if this mistake is recognized. In my own series this occurred in four patients without consequence.

The introduction of gas into a large vessel is almost an impossibility if aspiration is carried out prior to the injection of gas. If gas is injected in a blood vessel this is without danger. Studies by Stauffer, Durant and Oppenheimer[10] have shown that CO_2 injected intravenously for cardiography in man and dog can be carried out without risks or dangers. Case,[11] in 1921, reviewed the literature and found three deaths as a result of artificial pneumoperitoneum.

Technique

The procedure is a simple one which entails the introduction of 1.000 to 2.000 cc. of carbon dioxide into the abdominal cavity. The patient is placed in the Trendelenburg position so as to displace the bowel beneath the diaphragm and allow the gas to collect in the pelvis. A series of films are then taken of the pelvis.

The carbon dioxide may be introduced into the peritoneum by the transuterine route as an extension of the Rubin test, through the posterior fornix, or directly through the anterior abdominal wall. The latter is preferred since it is quickest, easiest and produces the least discomfort. The transuterine route is contraindicated with cervicitis, suspected pregnancy, uterine bleeding or tubal obstruction in addition to the other general contraindications for this study.

Patient Preparation. The procedure is explained to the patient in complete detail. The patient is then given a list of instructions as follows:

1. The day before this x-ray, the patient is instructed to take a liquid diet only, to take a laxative or enema, and to get plenty of rest.

2. The day of the x-ray, the patient has liquids only for breakfast. She is told that she will receive sedation at the hospital, and to have someone bring her to the hospital, at least two hours before the time for the x-ray.

About 45 minutes prior to the procedure, the patient is sedated with Demerol and Phenergan. Immediately before injection of the gas, the bladder is emptied by catheterization.

Procedure. Pneumoperitoneum is performed with the patient flat on her back. The site of injection is prepared with aqueous zephiran and anesthetized with one per cent procaine. An 18-gauge spinal needle is introduced into the peritoneal cavity, one inch to the left and one inch below the umbilicus. Old surgical scars or areas of suspected adhesions should be avoided. When the needle is felt to be in the peritoneal cavity, gas is injected. Between 1,000 and 2,000 cc. of carbon dioxide is injected at a rate of two to four liters per minute. The patient is then quickly placed in the knee-chest position and her hips briefly shaken from side to side to displace the bowel away from and the gas up into the pelvis. At this point the radiographs are taken.

Interpretation. Interpretation of the film requires a knowledge of the normal anatomy of the female reproductive system in order that variations in size, shape and position of these organs can be accurately evaluated. The degree of radiographic distortion is identical to the level of the uterus and adnexae so that determination of abnormalities is made by comparing the size of each ovary with the size of the uterus. Films should be read by both the gynecologist and radiologist. Thus, the combination of clinical knowledge of the patient's anatomy by the gynecologist plus accurate interpretation of the radiographic shadows by the experienced radiologist will insure the greatest accuracy in this diagnostic procedure.

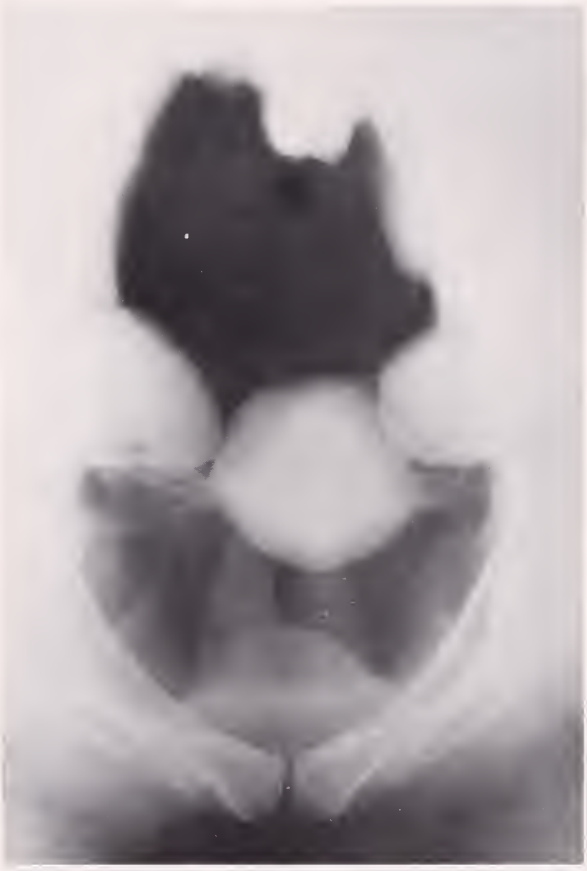


Figure 2. Stein-Leventhal syndrome. Note the symmetrical bilateral enlargement of the ovaries with respect to the size of the uterus.

Figure 1. Normal pelvis.

In evaluating films of a normal patient it must be remembered that the transverse diameter of the uterine fundus is two to three times greater than the major axis of the adnexae as shown in Figure 1. In contrast, Figure 2, which represents polycystic ovaries (Stein-Leventhal Syndrome), shows the major axis of the ovary to be equal to or even, at times, greater than the transverse diameter of the uterine fundus.

Endometriosis will produce a variable roentgenological picture depending on the extent of the lesion. Figures 3 and 4 represent two typical cases of this disease entity. Figure 3 demonstrates a typical case of ovarian endometriosis wherein it is still possible to distinguish the ovaries and uterus as separate organs. In contrast, Figure 4 represents a more advanced lesion. Because of

Figure 3. This patient had endometriosis. Note a large right ovarian cyst and a lesser left ovarian cyst.

extensive endometriosis, the uterus and adnexae are fused to the cul-de-sac as a single mass as well as fixed to the lateral pelvic wall.

Figure 5 is from a patient studied for infertility. Clinically, she was asymptomatic but as a part of her workup, she underwent gynecopraphy. The film showed bilateral cystic enlargement of the ovaries whichc was substantiated at laparotomy.

The difficulty of differentiating whether a pelvic mass arises from the uterine or adnexae is represented in Figure 6. This patient had a large pelvic mass on the right side. In this film, the mass is represented by a large uterine myoma which was easily distinguished from the normal-appearing ovaries.

TABLE 1

Indications For Pneumoperitoneum

1.	Adnexal mass revealed by pelvic examination	25
2.	Uterine enlargement versus adnexal mass	8
3.	Pelvie pain (dyspareunia, dysmenorrhea) without diserete pelvie pathology	52
4.	Unsatisfaetory pelvic examination (juvenile and unmarried)	9
5.	Infertility (primary and seeondary)	52
6.	Findings suggestive of chronie P.I.D.	10
7.	Obesity making examination unsatisfactory	16
8.	Suspected Stein-Leventhal syndrome	9
9.	Suspected eongenital anomaly of uterus	2
10.	Suspected endometriosus	16
11.	Previous surgery (patient uneertain of organs removed and in whom pelvie exam was diffieult)	3

Material

A total of 140 patients were studied by means of transabdominal pneumoperitoneum. The age range in this study varied from that of 15 to 46 years. No attempt was made to differentiate race, gravidity or parity. The most frequent indications for use of this diagnostic procedure in the present study are presented in Table 1.

It should be emphasized that those patients with infertility problems underwent a routine diagnostic infertility workup prior to this procedure. Pneumoperitoneum was then accompanied in these patients by hysterosalpingography. Those patients who, in addition to infertility, had menstrual disorders had appropriate endocrinology studies performed. Reference to Table 1 will reveal that several patients had more than one indication for gynecography.

A review of films from all the cases presented is summarized in Table 2. It is of interest to note

Figure 4. This patient had endometriosis together with pelvis inflammatory disease. Note the enlargement of the adnexae and also the distortion of the normal relationship between the adnexa and the uterus as well as adhesions between adnexa and the body of the uterus.

TABLE 2
Impression From Pneumoperitoneum

1.	Normal examination	39
2.	Verification of adnexal mass	34
3.	Pelvic inflammatory disease with pelvic distortion	23
4.	Endometriosis	16
5.	Compatible with Stein-Leventhal syndrome	12
6.	Uterine myomata	12
8.	Bicornuate uterus	2

that 39 cases were interpreted as normal. It should be pointed out that in the entire study, only 10 cases were considered technically unsatisfactory.

Correlation of Tables 1 and 2 showed that 24 patients were found to have adnexal enlargement, 12 patients had obvious uterine myomata, with three additional cases having diffuse uterine enlargement. There were 23 patients believed to have extensive chronic pelvic inflammatory disease from the x-ray studies and 16 cases were compatible with endometriosis. There were 12 patients who were suspicioned to have bilateral ovarian enlargement suggestive of Stein-Leventhal syndrome.

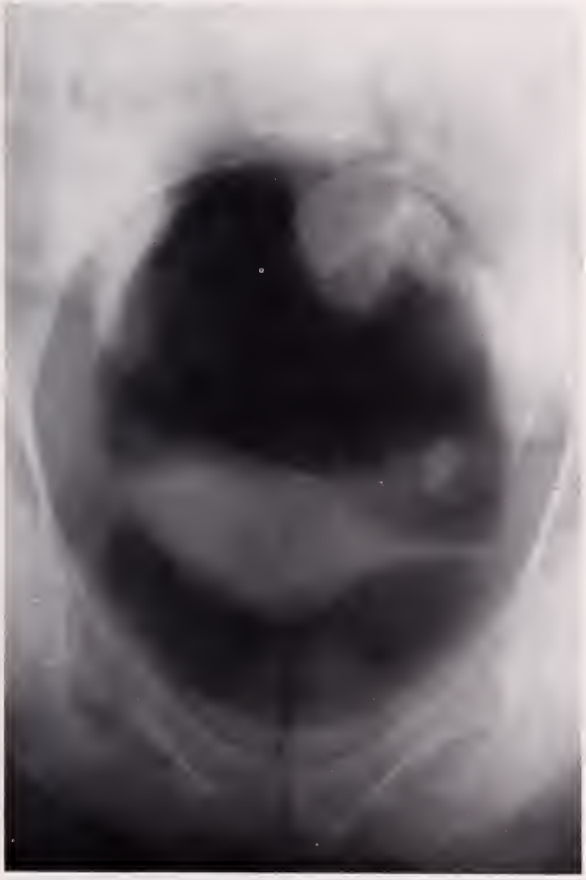


Figure 5. This photograph shows a normal uterus, a normal left adnexa and a large mass in the right adnexa. Note that the large cystic structure on the right adnexa is a paraovarian cyst. Within it one can see a normal ovary.

Figure 6. This photograph shows findings in a 19-year-old virgin. Note the large left ovarian cyst, which at laparotomy, was found to be endometriosis.

Results

Table 3 is a tabulation of the results of the 140 cases studied in this series. There were 57 patients who required no surgical intervention at all. This represents a significant number of patients who were spared some further surgical diagnostic procedure or a laparotomy. Eleven patients were lost to follow-up.

The 23 patients listed with pelvic inflammatory disease were substantiated by pathological report

TABLE 3
Findings And Results Following Treatment

1.	No surgical therapy indicated	57
2.	Endometriosus	24
3.	Pelvic inflammatory disease (proven pathologically)	18
4.	Pelvic inflammatory disease plus endometriosis	7
5.	Uterine myomata	7
6.	Stein-Leventhal syndrome	6
7.	Adenomyosis	2
8.	Serous cystadenoma of ovary	2
9.	Brenner cell tumor of ovary	1
10.	Corpus luteum cyst of ovary	2
11.	Paraovarian cyst	3
12.	Fibroma of ovary	2
13.	Lost to follow-up	11

Figure 7. Fibroid uterus.

and most of these underwent definitive surgical treatment consisting of hysterectomy with bilateral salpingo-oophorectomy. There were four patients who were salvable, however, who were treated by tuboplasty.

I was impressed by the number of cases (28) of endometriosis in this series. Although the preoperative impression of endometriosis was much lower than this, many of the cases with adnexal enlargement ultimately were found to have this unfortunate problem at the time of laparotomy.

The various types of adnexal masses which ultimately came to surgery ranged in pathology from that of large functional cysts to other benign conditions such as serous cystadenomas, a Brenner tumor, fibromas of the ovary and paraovarian cysts. There were no cases of malignancy in this series.

There were six cases of pathologically proven polycystic ovaries in which bilateral wedge resection was carried out. All of these cases were done prior to the availability of clomiphene citrate. All patients responded successfully by returning either to a normal or near normal menstrual pattern. Five patients became pregnant after wedge resection.

It is to be noted that some patients had multiple pathological findings.

Discussion

In the practice of any medical specialty, the trained physician must be familiar with and adept in the use of procedures both for diagnosis and treatment of disease. Pneumoperitoneum is a diagnostic procedure which, like all such procedures, is to be used in conjunction with a complete history and good physical examination to aid in the diagnosis and treatment of gynecological conditions.

In order to stimulate interest for the use of pneumoperitoneum, I have presented a series of 140 cases in which are discussed the indications, contraindications, complications, technique and results of such a study.

I feel that the technique used is relatively easy, simple and associated with infrequent and only minor complications. The technique outlined can be utilized within the radiology department of almost any size hospital and requires only a few simple basic instruments.

Historical review of the literature has shown a slow and somewhat reluctant acceptance of this procedure by gynecologists. I feel this is in part due to unfamiliarity with the procedure as well as over-emphasis of the contraindications and dangers associated with it. The main objections to artificial pneumoperitoneum are the danger of perforating the bowel or a blood vessel and the fear of gas embolism. These points have been discussed earlier in this paper.

While I believe that an accurate pelvic examination is the keystone to any gynecological problem, I must confess that there are instances, which by the way are not rare, when even repeated pelvic examinations fail to give an explanation for the complaint of the patient. Anyone who has performed or observed enough gynecological surgery has been surprised by the number of so-called phantom ovarian masses described at the time of pelvic examinations and not found at the time of laparotomy. The detection of ovarian enlargements, except in cases of extreme enlargement, is done by comparison of both adnexae. Because of this comparative evaluation of the adnexae, it becomes obvious that bilateral symmetrical enlargement of the ovaries as seen in the Stein-Leventhal syndrome, as well as in cases of hyperthecosis, can be missed on routine pelvic examination.

Most physicians are aware of the difficulties of pelvic examination in virginal or obese patients. It is in this area, as well as in the patient

who is experiencing severe pain during the pelvic examination, that pneumoperitoneum offers its greatest advantage. Artificial pneumoperitoneum in these cases is of unquestionable diagnostic value. It also should be pointed out that the patient with sterility and the patient in whom functional ovarian tumors are suspected are among the most difficult to evaluate. It is in these patients that the exact knowledge of the status of the pelvic organs becomes of paramount importance.

In establishing the nature of a problem after the history and the pelvic examination, we have available a number of diagnostic tools which permit the visualization of the pelvic organs. The available means may be divided into two groups: (1) those of direct visualization such as colpotomy, culdoscopy, peritoneoscopy and laparotomy; and (2) those of indirect visualization by means of roentgenology.

It is obvious that every one of the direct methods of visualization of the pelvic organs implies an operative procedure which, regardless of its simplicity, has its undesirable morbidity. These procedures require elaborate and expensive equipment as well as hospitalization from a few hours to several days. Pelvic pneumoperitoneum offers simplicity, accuracy, and above all, it is not a surgical procedure.

I would feel remiss if I did not say at this point that considering our experience with laparoscopy, my preference is to carry out an outpatient laparoscopy on patients in whom five years ago I would have done a pneumoperitoneum. But the purpose of this paper is to point out that pelvic pneumoperitoneum must be preferred to an exploratory laparotomy when the aim of the examiner is only that of a diagnostic investigation.

TABLE 4

Comparison Of Various Contrast Media

Contrast Medium	*Rate of Absorption*	*Advantages*	*Disadvantages*
Air	48-plus hours	None	Slow absorption resulting in prolonged discomfort for the patient
O_2	24-48 hours	None	
N_2O	15-20 min.	Fast absorption rate	Films must be taken fast before complete absorption of gas
Helium	24 hours	Fast absorption rate	High cost of gas
CO_2	15-20 min.		

I wish to emphasize, however, that contraindications to this procedure do exist, but if kept in mind, will minimize any complications. These complications can and do occur infrequently, but they are easily recognized and carry little risk.

It has been said by many that the abdominal pain and discomfort experienced by the patient during pneumoperitoneum are avoided by slow insufflation. In this study, I divided the patients into two groups. In the first, I injected the carbon dioxide by means of a slow insufflation with Kidde apparatus; and in the second, I injected the carbon dioxide directly from the tank at high speed through a large-bore needle. Surprisingly, the *second group* experienced less pain.

A discussion of this subject would not be complete without disclosing that carbon dioxide was chosen because of its particular absorption rate and lack of peritoneal irritability. In 1919, investigators showed its rapidity of absorption by injecting carbon dioxide into the peritoneal cavity of rabbits. Other gases, as well as room air, have been used in the past. The relative advantages and disadvantages of the various gases used in artificial pneumoperitoneum are shown in Table 4. The possibility of contamination of the peritoneal cavity is almost nonexistent if care is taken to prepare the injection site. I have previously referred to the studies of Alvarez, who cultured with negative results the gas removed from the peritoneal cavity after use of pneumoperitoneum.

Those patients who underwent pneumoperitoneum and who subsequently had abdominal surgery were explored to perceive any adhesions between the omentum and the bowel, and the site of the injection. None were found. The correlation between the roentgenological and the laparotomy findings make the procedure a most satisfactory one.

Impressive were the number of patients whose symptomatologies were unexplainable despite adequate work-ups. The performance of pneumoperitoneum in this group of patients permitted reexaminations of each and an explanation of the patient's problem in relation to the radiographic findings was all that was necessary to relieve their complaints.

Ninety-eight patients were studied on an outpatient basis and none required hospitalization for either discomfort or complications. The remaining 42 were studied while inpatients.

The indications used in this study, as well as the x-ray findings and surgical results, were all tabulated as objectively as possible. Further

surgical diagnostic procedures or laparotomy were avoided in 57 per cent of the total patients studied. The remaining patients all had pelvic pathology which required surgical intervention. In addition, x-ray pneumoperitoneum helped reduce undue delay in treatment and helped institute the proper surgical approach in these patients.

In conclusion, the simplicity of technique in performing pneumoperitoneum, which has such a close correlation between the radiographic findings and the surgical pathology involved, in patients who are not easily evaluated by a single pelvic examination, more than outweighs the complications associated with this diagnostic procedure.

Summary

(1) A historical review of artificial diagnostic pneumoperitoneum has been presented.

(2) The indications and contraindications, as well as complications, of this procedure were tabulated and discussed.

(3) The technique for transabdominal pneumoperitoneum has been outlined.

(4) A comparison of normal and abnormal roentgenograms with associated interpretation is used to point out the value of the procedure.

(5) A series of 140 patients who underwent pneumoperitoneum has been presented in regard to indications, radiographic interpretation and surgical results.

(6) A comparative evaluation of pneumoperitoneum with other diagnostic procedures such as culdoscopy, colpotomy and peritoneoscopy was briefly discussed.

(7) The relative merits of various contrast media used in this procedure have been tabulated.

(8) Gynecography is a quick, inexpensive, safe, non-surgical, but extremely valuable, diagnostic procedure for the practicing gynecologist.

(9) In today's practice of gynecology, the practice of an exploratory laparotomy as a diagnostic method is to be condemned; the patient with questionable pelvic pathology, the patient with an infertility problem, the patient with a known previous pelvic surgery should be investigated by endoscopy; however, when this modality is not available, a plea is made for the use of pelvic pneumoperitoneum.

References

1. Jacobaeus, H. C.: Uber Laparo- und Thorakoskopie. Beitr. Klin. Tuberk., 25:-183-354, 1912.
2. Weber, E.: Uber die Bedeutung der Einfuhrung von Sauerstoff resp. Luft in die Bauchhohle fur die experimentelle und diagnostische Rontgenologie. Fortschr. Roentgenstr., 20:453-455, 1913.
3. Lorey: Demonstration einiger seltener Tontgenbefunde. Verh. Deutsch. Roentgen-Ges., 8:46-52, 1912.
4. Goetze, O.: Die Rontgendiagnostik bei gasgefullter Bauchhohle; eine neue Methode. Muenchen. Med. Wschr., 65:1275-1280, November 12, 1918.
5. Stein, A., and Stewart, W. H.: Pneumoperitoneal Roentgen-Ray Diagnosis. (A Monograph, with Atlas.) Published by the Southworth Company, Troy, New York, 1921.
6. Alvarez, W. C.: Use of CO_2 in Pneumoperitoneum. Am. J. Roentgenol. 8:71, February, 1921.
7. Rubin, I. C.: Subphrenic Pneumoperitoneum Produced by Intra-Uterine Insufflation of Oxygen as Test of Patency of Fallopian Tubes in Sterility and in Allied Gynecological Conditions. Am. J. Roentgenol. 8:120, Marche, 1921.
8. Peterson, R.: The X-ray After the Inflation of the Pelvic Cavity with Carbon Dioxide Gas as an Aid to Obstetric and Gynecologic Diagnosis. Surg. Gynec. Obstet., 33-154-157, August, 1921.
9. Stein, I. F., and Arens, R. A.: Iodized Oil and Pneumoperitoneum Combined in Gynecologic Diagnosis. Preliminary Report. J.A.M.A., 87:1299, October 16, 1926.
10. Stauffer, H. M.; Durant, T. M., and Oppenheimer, M. J.: Gas Embolism. Roentgenologic Considerations, Including the Experimental Use of Carbon Dioxide as an Intracardiac Contrast Material. Radiology, 66:686-692, May, 1956.
11. Case, J. T.: Review of Three Years' Work and Articles on Pneumoperitoneum. Am. J. Roentgenol. 8:714, December, 1921.

Special Article

Scholarship In Medicine*

Edmund B. Flink, M. D.

It is a pleasure for me to speak to you on this important occasion. Your parents and families have a great investment of love, moral and financial support and trust in you. Our State has a large investment in you. We members of the faculty have a big investment of time, trust and emotions in you. In turn, we owe you a great deal of respect and admiration for your own great personal investment of effort and dedication to your professional education. All of us are proud of you.

I have chosen to speak on the subject of 'Scholarship in Medicine.' A scholar may be defined as an attentive and systematic observer and one who has engaged in advanced study and acquired knowledge in a special field. I have tried to foster a spirit of inquiry—of scholarship—in medical students ever since I first joined a faculty of medicine in 1942. I only regret that I have not been able to be more effective.

Scholarship is the essence of a university, and it is the essence of our profession. I shall try to enlarge on my perceptions of the words study, scholarship, inquiry and research. Scholarship covers the whole spectrum of human life from ethics, religion, philosophy, literature and fine arts to scientific research at the most basic levels of molecular biology. One is tempted to divide the subject into practical scholarship (e.g., problem-solving) and theoretical scholarship (e.g., learning about the discoveries of the most recent Nobel Laureate in Biology and Medicine or about Beethoven's symphonies), but such division is artificial. Scholarship should enrich our lives, secure the best medical care possible for our patients, increase our job satisfaction and make us humble at the realization of the enormous scope of our ignorance.

Spirit Of Inquiry

In order to maintain scholarship, it is necessary to have a spirit of inquiry—to ask Why? How? When? What? How can we learn more about this patient and his problem? What must we know in order to help a patient with an incurable illness accept the facts? How can we help a family and friends of a patient through their grief at the loss of a loved one? For beginners, reading a book like Elizabeth Kubler-Ross's "Of Death and Dying," Peabody's lecture, "The Care of the Patient," and Christ's "Sermon on the Mount," will help. (The Sermon on the Mount has a message for all, whether one has religious convictions or not—whether Jew, Christian, Moslem, Hindu, etc., or no religious convictions). The ultimate goal of a physician's life is kind and compasionate care with optimum skill.

Lord Lister, the father of antisepsis, emphatically expressed the need for continuing scholarship when he said to his students, "If you are not willing to learn and unlearn all your life through, you should abandon medicine." Sir William Osler, one of the greatest physicians of the past century, emphasized the need for systematic study of books and patients by saying, "To study medicine without books is like going to sea without charts, but to study medicine without patients is like not going to sea at all." The two quotations are really the 'text' of my talk. Both Lord Lister and Sir William Osler had courage to venture forth often on uncharted seas, but they also were superb scholars of the charted sea of knowledge current at their time. We are all richer for their example, scholarship and research.

Continuing Scholarship Need

Let me illustrate the need for continuing scholarship in medicine from my own experience. Insulin was introduced for the treatment of diabetes by Banting and Best fifteen years before I started my internship, and protamine zinc insulin was introduced the year of my internship. Liver therapy of pernicious anemia was introduced 10 years before my internship by Minot and Murphy, but vitamin B_{12} (the "extrinsic factor" of William Castle contained in liver extract) was identified and made available 11 years after my internship. The following highlights of clinical medicine were either introduced during the years of my internship or later:

• **Edmund B. Flink, M. D., Professor and Chairman of the Department of Medicine, West Virginia University School of Medicine, Morgantown.**

*This address was delivered by Doctor Flink to the 1976 graduating class of the WVU School of Medicine on May 15.

Sulfonamides, penicillin, streptomycin and all other antibiotics; the recognition of bleeding from prothrombin deficits and its correction with vitamin K; the current elaborate and precise knowledge about bleeding and clotting mechanisms; the role of Rh factor in severe jaundice of the newborn and serious intrablood .group transfusion reactions resulting in the nearly complete eradication of the enormous health problems represented by Rh sensitization; cardiac catheterization and angiography; use of radioactive isotopes in therapy of human diseases; the use of radioactive isotopes in measuring hormone levels and other substances which are present in extremely small amounts in blood; the use as radioactive tracers or markers in most areas of chemical and biological research: the synthesis of cortisone and its analogues with the far-reaching effects in all kinds of diseases; a veritable explosion in human genetics as a direct outgrowth of basic research on the identification of genes, gene action and control in microorganisms and insects like the fruit fly; the structure and function of DNA and RNA; the whole concept of molecular biology, etc. . . . etc.

The above list is small. Each subject has very extensive ramifications. I have just cited the tip of the iceberg. I have had to become familiar with some aspects of all of these subjects but, of course, to varying degrees and always not nearly as much as I would like. What would have happened to me if I had ignored this progress? I would be hopelessly out of date! Clearly, you wouldn't have to listen to me tonight. New medical-biological knowledge is continuing to be added to the sum of knowledge at a geometric rate. This growth is the cause of concern because of difficulty in keeping up with advances.

Anti-intellectual Attitude

Throughout the history of mankind scholars have been regarded with suspicion by many who do not consider themselves to be scholars. Currently, there is a highly visible anti-intellectual attitude in the United States and in West Virginia. In physics (mechanics), we learned that for each force there is an equal and opposite force. The opposing force to anti-intellectualism is intellectual snobbery. To be sure, a pendulum motion occurs. Let's analyze some of the forces. There are many reasons for this conflict. A given scholar or group of scholars may be unable to communicate their ideas or findings to people who are not conversant with their subject. Some scholars then try to simplify the information and try to sell it in an attractive and understandable way. This effort is usually very much appreciated, but it sometimes backfires and results in expectant goals which are not easily or rapidly attainable. This results in dismay and disillusionment of scholars too, so they retreat from trying to communicate.

Misunderstanding results in distrust and generalizations of an anti-intellectual nature. Unfortunately, there are crafty, dishonest or unscrupulous persons who capitalize on incomplete data, half-truths and downright falsehoods causing further distrust.

Intellectual Snobbery

Some intellectuals are Sophists (one of a class of Greek teachers of philosophy—clever and interested in high sounding words without concern for the content—perhaps the best definition of intellectual snobs). I acknowledge the burden of intellectual snobbery and aloofness. Knowledge which is used only to prove one's superiority over others has no redeeming value and has no place in our lives. Clearly, a person who is interested only in intellectual superiority is not really a scholar. On the other hand, one derives inner satisfaction from knowing certain facts, being able to unravel a complex problem, etc. You all know this, and I simply want to emphasize this real payoff for scholarship.

The opposite force of anti-intellectual attitudes is very strong. In recent years there have been many damaging statements in the press, in books and on radio and television by persons who have the privilege of an excellent university education. I am not talking about constructive criticism and honestly expressed doubts. The written and verbal attacks reached a peak about two years ago. The very existence of institutions of higher learning could be threatened if the pronouncements of such educated anti-intellectuals were to become the basis of thinking by the majority of people in this State and country. A concrete example of a recent very sophisticated (in the bad sense of the word) attack on medicine by Ivan Illich is his book, "Medical Nemesis." Unfortunately, we must be alert to such attacks and be willing to study them and remain informed, but we must be willing to study reasoned criticism.

True Nature Of University

The true nature of colleges and universities is not understood or appreciated by many students who graduate from these institutions and even by some members of faculties. Schools and colleges of medicine are no exception. There is an inevitable gap between students and faculty. Too often there is an adversary relationship be-

tween faculty and students. These two factors result in hostile feelings by all students some of the time and some students often and even at the time of graduation. One factor is the inability of faculty members to become intimately involved in an ongoing tutorial relationship with the students. Our faculty is not large enough for a one-to-one relationship, but we members of the faculty often fail to communicate to our students the meaning of a university and its only viable reason for being, namely, scholarship in the broad sense of the word. The name university implies a cohesion of many forces. It is important that all of us respect other scholars and their disciplines. A university is a community of scholars studying all aspects of human knowledge and endeavor.

A university must be the "keeper of the keys" of knowledge. It must continue to develop methods of making available and of disseminating knowledge to all of its scholars—both students and faculty. The custodial and dispensing functions, though, are not the only or even the most important ones. A university must be able to stimulate its scholars to search for new knowledge —it must foster research by its scholars. I'm pleased with the serious research efforts of a number of our students and their annual research seminar. Unless a faculty participates actively in finding new information, it soon becomes decadent. Research is basically the spirit of inquiry. New and unusual manifestations of diseases, new insights into history and geography and the whole gamut of human experiences should be recorded carefully and correlated with known facts. The only outcome may be job satisfaction for the research worker.

There are superb examples of practitioners who have made monumental discoveries, e.g. the serious consequences of maternal rubella for the infant in 1940 by Gregg, an Australian practitioner. and the protective action of cow pox against smallpox by Jenner at the end of the eighteenth century. Careful recording of observations is the mark of a scholar and a research worker. Every one of you can and should record your observations in an orderly and retrievable manner.

Ongoing Research Vital

We've heard much about the idea that we, the faculty of West Virginia University, should teach only practical medicine and not waste our time in pursuit of new ideas. I tell you emphatically that a faculty devoted solely to teaching without actively pursuing some research goals would quickly become sterile and unable to teach well. A quotation from Louis Pasteur eloquently makes this point: "Take interest, I implore you, in these sacred dwellings which one designates by the expressive term: laboratories. Demand that they be adorned . . . they are the temples of well-being and of happiness. . . ." I do not for a moment suggest that a major part of each faculty member's time should be spent in a research laboratory, but ongoing research interests are truly a vitamin B_{12} to prevent pernicious anemia of the intellect. Again I say that a university is a community of scholars, and an integral part of a scholar's life is inquiry.

There are many newly trained health personnel knocking at our door. We must keep our knowledge and ability at its optimum all of our lives, or we will lose our present leadership role in medicine. I invite you to continue as members of the community of scholars of West Virginia University for the rest of your lives—to be players on our first team of Scholars in Medicine for a lifetime.

1976 Student Research Convocation West Virginia University School of Medicine

THE Twelfth Annual Student Research Convocation was held on April 5, 1976. The first prize, an engraved medallion and a $100 cash award, was established in 1965 to honor Dr. Edward J. Van Liere, Dean Emeritus, for his leadership in bringing the School of Medicine to full stature, his devoted interest in students, and his many scientific achievements through medical research. The second and third prizes were $50 and $25, respectively. Publication of the abstracts in *The West Virginia Medical Journal* constitutes an important and much appreciated recognition of the students' efforts.

Roy L. Butcher, Ph. D., *Chairman*
Student Research Convocation Committee

The Comparison Of The Hypnotnic Activity Of Triazolam, Diazepam, And Placebo In Inpatient Insomniacs

E. L. Boyd, Medicine II; Richard B. Knapp, M. D.; Daniel Remen, M. D.; and O. I. Linet, M. D.

TRIAZOLAM is a triazolobenzodiazepine, 8-chloro-6 (0-chlorophenyl)-1-methyl-4H-S-triazolo (4, 3-a) (1, 4), benzodiazepine shown in a number of clinical studies to have potent hypnotic activity. The purpose of this study was: (a) to compare the relative potency of triazolam to diazepam; (b) to evaluate the safety and efficacy of triazolam; and, (c) to compare the side effects of triazolam, diazepam, and placebo in inpatient insomniacs. Thirty adult inpatients of American Society of Anesthesiologists classes I and II completed the study of a comparison of triazolam, 0.25 mg and 0.5 mg; diazepam, 5 mg and 10 mg; and placebo, performed in a double-blind, randomized five-night crossover study.

Evaluation of the five medications studied showed that triazolam (0.5 mg) helped the patients sleep significantly more than placebo, diazepam (5 mg) or diazepam (10 mg). Evaluation of sleep onset showed triazolam (0.5 mg) to be significantly better than diazepam (5 mg). On duration of sleep, triazolam (0.25 mg and 0.5 mg) was significantly superior to diazepam (5 mg). On number of awakenings, triazolam (0.5 mg) was significantly better than placebo or diazepam (10 mg). No significant side effects were noted in either the triazolam or diazepam group of patients.

The Biohydrogenation Of Cholesterol To Coprostanol By Bacteria In Vitro

James M. Carrier, Medicine II

PREVIOUS work in the Charleston Foundation Cancer Research Laboratory has shown that patients with Gardner's Syndrome excreted more cholesterol than coprostanol, whereas the reverse is true for normal subjects. This suggests that a difference in the intestinal flora or environment may exist as compared to that of the normal subject. The conversion of cholesterol to coprostanol was studied in vitro in an attempt to isolate the micoorganism responsible for the biohydrogenation of this Δ^5-steroid.

A 5 per cent beef-brain media was prepared under anaerobic conditions according to the VPI technique. The media was inoculated with either fresh feces, sterilized feces, or a subculture from fresh feces under anaerobic and aerobic conditions and incubated at 37°C for seven days. After incubation, the contents were saponified by 1 N ethanolic NaOH at 120°C for three hours. The supernatant was filtered, extracted by petroleum ether, and converted to TFA-derivatives. Quantification of the sterols was determined by

gas-liquid chromatography. The incubation of human feces with brain media showed maximal conversion of cholesterol to coprostanol only under anaerobic conditions. Maximum yield of coprostanol was obtained after five days incubation with greater yield occurring in either acidic or alkaline media. Incubation of sterilized feces showed no conversion.

Fresh feces from the same donor was subcultured anaerobically with the 15th subculture demonstrating 85 per cent conversion of cholesterol to coprostanol. This subculture was streaked onto brain agar plates and incubated for two days at 37°C. The plates were extracted and conversion was evident; however, no pure colonies were isolated that still retained the capacity to convert.

These results suggest that a possible synergistic action between two or more obligate enteric anaerobes, susceptible to subtle changes in pH, are responsible for the biohydrogenation of the Δ^5-steroid.

Mechanism Of Action Of Spironolactone On Adrenocortical Function In Guinea Pigs

James Jarrell, Medicine II

SPIRONOLACTONE is a diuretic used in the diagnosis and treatment of primary aldosteronism and in the treatment of "low renin" hypertension. The drug had been thought to act solely as a peripheral antagonist of aldosterone, decreasing renal sodium reabsorption. However, recent evidence suggests that spironolactone decreases adrenal secretion of corticosteroids as well. The major objective of the following studies was to determine the mechanism of action of spironolactone on adrenocortical function.

Spironolactone was administered to male guinea pigs as an intraperitoneal injection at a dose of 50 mg/kg/day for 3 days. The animals were sacrificed by decapitation, the adrenal glands were removed, homogenized and subcellular fractions prepared by differential centrifugation.

Spironolactone treatment decreased cortisol production by adrenal slices *in vitro* (11.3 vs 4.8* nmoles/100mg/hr) (*$p < 0.05$). Accompanying the decline in cortisol production were decreases in adrenal mitochondrial (0.6 vs 0.2* nmoles/mg prot) and microsomal (1.7 vs 0.9*) cytochrome P-450, the terminal oxidase for various steroidogenic enzymes. Activities of reactions dependent upon cytochrome P-450, including 11β-hydroxylation, 21-hydroxylation and cholesterol sidechain cleavage, were significantly decreased by spironolactone treatment. In contrast, adrenal enzymes not dependent upon cytochrome P-450 such as Δ^4-hydrogenase and cytochrome c reductase, were unaffected. Addition of spironolactone to adrenal mitochondria or microsomes *in vitro* produced type I spectral changes (peak 385 nm; trough 420 nm), indicative of binding to cytochrome P-450. Binding of endogenous steroid substrates to cytochrome P-450 was blocked by prior addition of spironolactone.

Conclusion: Spironolactone administration decreases the activity of several important steroidogenic enzymes by decreasing adrenal cytochrome P-450 content and blocking substrate interactions with the cytochrome, resulting in a decline in adrenal corticosteroid output.

Conditioning Of Dogs For Alcohol Withdrawal Study

Gary D. Marano and Rocco A. Morabito, Medicine IV

THE purpose of this study was to establish a population of dogs that were addicted to alcohol. Once the addiction was achieved, it would be feasible to study the pharmacological effects of drugs, particularly glucagon, on the lowering of free fatty acids (FFA) during alcohol withdrawal.

Seven normal dogs of multiple breed were chosen for the study, and kept at the Clarksburg VA Hospital Animal Quarters, having full access to standard dietary requirements. After the dogs established residency for two weeks, Pavlovian type of conditioning was begun, in which "cheese" acted as the unconditional stimulus,

and the "drinking of alcohol" as the conditioned response. Three times daily, the dogs were initially presented with a piece of cheese by hand, and simultaneously cheese submerged in 1 per cent alcohol, being allowed 30 minutes to consume the alcohol and cheese. This regimen was continued until the dogs reflexly consumed the cheese-alcohol mixture within the allotted time, and then the percentage of alcohol was gradually increased to a maximum of six (6) grams ethyl alcohol/kg. per day, using a 20 per cent mixture. This conditioning program was continued for six weeks, at which point the alcohol was mixed with regular dog food *without* cheese, and the dogs showed no regression to the conditioned response. During this conditioning, each dog showed its own timing and adaptiveness to alcohol addiction.

Addiction to alcohol was evidenced by individual activity of the dog prior to feeding—agitation, increased barking, increased movement in the pen, and tremor—while post-feeding demonstrated instability of gait, decreased tremor, and generalized calming of the animal. After six weeks, the dogs were continued on alcohol during four-week periods, and then acutely withdrawn to study the effects of glucagon on FFA rise during stress. During withdrawal, it was noted that all dogs were extremely agitated, had severe tremors, and one dog displayed generalized seizures.

FFA levels in this experiment were equivalent to those shown in previous studies of force-feeding dogs six (6) grams of ethyl alcohol/kg. for 10-14 days. In those previous studies, FFA levels prior to alcohol administration averaged 388.4 uEq/L, and on the day of withdrawal, before glucagon injection, averaged 690.1 uEq/L. In the present study, the FFA levels were, respectively, 445.0 uEq/L and 878.6 uEq/L. After withdrawal, the dogs were restarted on daily alcohol without regression of maximum dosage.

To our knowledge, such experimental design has not been previously demonstrated. With regard to lowering of FFA, we have shown a maximum decrease of 63 per cent with glucagon, and an objective, generalized calming of dogs with lower FFA levels.

Transmission And Scanning Electron Microscopy On Status Spongiosus In Creutzfeldt-Jakob Disease

William Payne, Medicine II; and S. M. Chou, M. D.

STATUS spongiosus has been considered to be a histopathologic hallmark of Creutzfeldt-Jakob (C-J) disease, a "transmissible virus dementia." This study attempts to further characterize the vacuoles of status spongiosus in both original (human) and transmitted (money) C-J disease by correlating the findings of transmission (TEM) and scanning (SEM)electron microscopy. The brain specimens obtained at autopsy from two C-J patients, two normal humans, two C-J monkeys, and a normal monkey were fixed in glutaldehyde and post-fixed in osmium tetroxide for both TEM and SEM. For SEM, the specimens were dehydrated in acetone, freeze-fractured in liquid nitrogen, and then critical-point dried before coating with gold.

The vacuoles in the cortical gray matter are readily detected by both TEM and SEM and are composed of clusters of blisters of various sizes. With SEM, these vacuoles contain ruptured or intact physaliphorous blisters to whose inner and outer surfaces are attached small vesicles (70 to 150 nm) and particles. The outer surfaces of the blisters are uneven and often demonstrate a superficially ulcerated appearance in comparison to the smooth fractured surfaces in the vicinity.

With TEM, many small vesicles within the blisters suggest that at least some of the blisters are derived from swollen terminal axons. The membranes of the blisters are irregularly curled and fragmented and often appear puffy and amorphous. They are associated with fine dense granules (5 to 10 nm) in chains resembling staining precipitates. These puffy membranes may not be tangentially cut unit membrane, but altered, focally thickened, defective membranes laden with "viral" agents.

In both TEM and SEM the features of the vacuoles in the original and transmitted C-J disease are essentially identical.

Complement As A Mediator Of Hypersensitivity Pneumonitis

Dale R. Pokorney, Medicine II

CONDITIONS analagous to those used to assess human hypersensitivity pneumonitis have been achieved in our animal model by monitoring arterial oxygen tensions following aerosol challenge with antigen. All animals used in this study were unimmunized and displayed no precipitins to antigen prior to challenge.

A normal rabbit aerosolized with *Aspergillus terreus* spores showed a marked decline in arterial oxygen tension post-exposure; a rabbit with an abnormally low level of serum complement exhibited a relatively minor decline in arterial oxygen tension post-exposure. Both animals exhibited a significant post-exposure decrease in hemolytic complement activity. Because these animals demonstrated no precipitins and developed diminished complement levels subsequent to exposure, non-specific activation of complement was considered to be the mechanism mediating lung damage, correlating with other *in vitro* and *in vivo* studies.

To elucidate a pathological role for complement, rabbits genetically deficient in the sixth component of complement were obtained from NIH. Serum from these animals exhibited no hemolytic complement activity. Unlike these controls, upon aerosolization with *Aspergillus terreus* spores none of the animals displayed a significant decline in arterial oxygen tension post-exposure.

This work strongly implicated a vital role for C6 as a mediator of lung damage. Perhaps the C567 chemotactic complex is an essential participant. By realizing that non-specific activation of complement may result in the clinical manifestations seen in hypersensitivity pneumonitis, development of spontaneous disease in humans upon inhalation of moldy particulate matter may be better understood.

Serous Otitis Media: An Immune Mediated Disease

Robert Pusateri, Medicine I; Peter E. Maxim, Ph. D.; and Robert W. Veltri, Ph. D.

CHRONIC serous otitis media (CSOM) is a disease of unknown etiology comprising three to four per cent of all ear, nose and throat diagnoses. It is a disease of the middle ear which causes conductive hearing loss during the formative years of childhood. This study provides evidence that type III immunopathology (immune complex), plus complement activition, may be responsible for the recurrence of CSOM. It was the objective of this study to show the presence of components of an alternate complement pathway and that the conversion of C3 proactivator (C3PA) to (C3A) can occur as a result of those organisms most commonly associated with acute otitis media.

C3PA in ear fluids was demonstrated by counter immunoelectrophoresis. The C3PA positive ear fluids were incubated with non-viable *S. pneumoniae*, *S. pyogenes* and *H. influenzae* and then tested for conversion of C3PA to C3A by immunoelectrophoresis. This conversion is demonstrated by the cathodal shift in electrophoretic mobility of the protein.

Of the 65 ear fluids tested for C3PA, over 30 per cent were positive. This demonstrated that the mechanism for activation of the alternate complement pathway is indeed present in these ear fluids. It was also shown that C3PA was converted to C3A following contact with paraformaldehyde fixed, non-viable *S. pneumoniae*, *S. pyogenes* and *H. influenzae*.

The results of this research suggest that recurrence of CSOM is a manifestation of an immunological response initiated by antigen from the oropharynx which makes its way to the middle ear via the Eustachian tube. This immune response would be facilitated by the alteration of the middle ear mucosa caused by repeated inflammatory responses following an acute episode(s) of otitis media.

Scatchard Plot Analysis Of Androgen Binding To Cytosol Androphilic Proteins In The Male Guinea Pig

Frank L. Schwartz, Medicine II; and Michael G. Mawhinney, Ph. D.

THE fact that male sex accessory tissues, particularly the epithelial components, are selectively dependent upon adequate concentrations of circulating plasma androgen has been assumed to be due at least in part, to a selective capacity to accumulate high intracellular levels of androgen. Studies utilizing Scatchard plot analysis to quantify specific cytosol receptor binding sites and their relative affinities (1/Kd) for either testosterone-H^3 (T-H^3) or dihydrotestosterone-H^3 (DHT-H^3) in cytosol preparations from various tissues of the male guinea pig support this concept.

Results from these studies demonstrated that, of all tissues examined, the seminal vesicle epithelium (SVE) exhibited the greatest number of specific cytosol androgen receptor sites (T = 54.28 ± 4.54; DHT = 59.91 ± 6.23 moles of steroid bound $\times 10^{-15}$/mg cytosol protein). Although the SVE androphiles bound approximately equal amounts of either androgen, these androphilic proteins exhibited a higher affinity (1/Kd) for DHT (DHT = 0.054 ± 0.007; T = 0.0268 ± 0.002 liters $\times 10^{11}$/mole of steroid). The seminal vesicle muscle (SVM) and prostate (P) exhibited lower levels of specific androphilic cytosol receptor sites compared to the SVE. In addition, both SVM and P exhibited lower receptor affinity for DHT (SVM = 0.00218 ± 0.001; P = 0.0250 ± 0.001 liters $\times 10^{11}$/mole of steroid) than the SVE; however, cytosol receptor affinities for T were approximately equal in all sex accessory tissues. Non-sex accessory tissues exhibited varying numbers of androphilic cytosol receptor sites, and possessed significantly lower binding affinities for either T or DHT when compared to the male sex accessory tissues.

This work supports previous studies demonstrating a selective capacity of male sex accessory tissues to concentrate endogenous DHT intracellularly. Furthermore, this study demonstrates that the extremely high levels of endogenous DHT contained within the male sex accessory tissue appears to be determined in part by the presence of a large concentration of specific, high affinity androphilic molecules within their cytosol preparations compared to non-sex accessory tissues.

Isolation Of Tumor-Associated Antigens From Human Lung Cancer Cells

Ellen S. Shaw, Medicine II; and Robert W. Veltri, Ph. D.

TUMOR cells from human cancer possess antigenic properties different from those of normal cells. The purpose of this study was to determine if cells isolated from primary lung carcinomas and grown *in vitro* produce tumor-associated antigens (TAA). Such cells may be used as a source of TAA in the development of immunoassays. Human lung cancer cell lines, LC-549 and Calu, and the WI-38 human embryonic lung cells were harvested from roller bottles containing about 10^8 cells each.

The cells were extracted by two methods: whole cells were treated with 3MKCL, or the cells were disrupted by freeze-thaw and hypotonic lysis and separated into soluble and membrane fractions. In the latter method, the membrane fractions were solubilized with 3MKCL and sonication, and the proteins in the soluble fractions were precipitated with ammonium sulfate. These extracts were analyzed by polyacrylamide gel electrophoresis and by immunodiffusion against rabbit antisera prepared to human tumor extracts.

The electrophoresis data indicate the presence of unique proteins in the soluble fractions of

LC-549 and Calu cells and in the comparable tumor extracts, but not in the normal lung counterparts. These biochemical differences have not been reflected using immunologic techniques. However, a common antigen has been identified in the tumor cell lines, WI-38 and normal lung 3MKCL extracts. No TAA has been characterized yet in lung tumor cell lines. More sensitive immunoassays are planned for further analysis for TAA.

The Mechanism Of Ristocetin Induced Platelet Aggregation

Jerry E. Squires, Medicine II

THE mechanism by which the antibiotic Ristocetin induces aggregation of blood platelets is not clear. Platelet aggregation was studied in platelet-rich plasma (PRP) to which varying concentrations of Ristocetin were added. At high Ristocetin concentration (1.00 mg/ml.) full platelet aggregation occurred rapidly, as demonstrated by aggregometer tracings. Ristocetin at concentrations below 0.50 mg/ml produced no platelet aggregation. At the lowest concentration sufficient to induce aggregation (0.75 mg/ml) distinct primary and secondary waves of aggregation were noted. ADP released during secondary aggregation, measured by the firefly luciferase technique, suggested that secondary aggregation might be ADP-dependent. Creatine phosphate and $MgCl_2$ were added to PRP before addition of Ristocetin. Creatine phosphokinase (CPK) (10 units/ml), which converts ADP to ATP, was added before or after Ristocetin. In the presence of CPK secondary aggregation failed to occur. Primary aggregation was unaffected.

These data indicate that Ristocetin-induced primary aggregation is ADP-independent and that secondary aggregation is ADP-dependent. Ultrastructural studies revealed complex aggregates of degranulated platelets having morphology reminiscent of the aggregates induced by ADP.

Left Ventricular Procedures—A Critique Of New Non-Invasive Techniques

Keith D. Stottlemyer, Medicine IV; and Allen F. Bowyer, M. D.

OVER the past decade, there has been growing interest in non-invasive techniques of systolic time interval analysis, echocardiography, and radiocardiography. Non-invasive techniques require at most a simple venapuncture, are relatively low in risk, and inexpensive, but less definitive than invasive cardiac catheterization. Ejection fraction measured by angiocardiography is the best indicator of left ventricular performance. Patients with poor left ventricular performance have a small ejection fraction, poor prognosis, and increased surgical risk. If non-invasive tests can reliably predict ejection fraction, then they could be used to avoid the risks and costs of an invasive study. Identifying those patients with small ejection fractions using non-invasive techniques might spare this high-risk group a more hazardous investigation and therapy.

Twenty-two patients underwent cardiac catheterization, echocardiography, radiocardiography, and systolic time interval analysis at West Virginia University Hospital. The radiocardiography technique in this group was the best predictor of ejection fraction with echocardiography and systolic time intervals showing poorer correlation. The correlation coefficient for the radiocardiographic technique was $+ .63$ and SEE $= \pm .10$; for the echocardiographic technique, $+ .33$ with SEE $= \pm .15$; and for systolic time intervals, $- .24$ with SEE $= \pm .16$.

Radiocardiography shows promise as a good predictor of ejection fraction determined at cardiac catheterization. Further investigation seems warranted to establish more accurately the correlation, reproductability, and predictability of this technique.

A message from . . .

The President

REFLECTIONS ON THE AMA IN 'BIG D'

A report to our membership on the annual American Medical Association meeting held in Dallas is in order. First, our Delegates, Drs. Frank J. Holroyd and Richard E. Flood; and our Alternates, Drs. George R. Callender, Jr., and Harry S. Weeks, Jr., not only stayed on top of long House of Delegates proceedings, but were instrumental in election of Dr. John H. Budd of our neighboring State of Ohio as the AMA's President Elect. Meanwhile, some groundwork was laid for advancement of additional West Virginia physicians in the AMA hierarchy.

Renewal of friendships with colleagues from surrounding or nearby states emphasized anew the desirability of solidifying our medical philosophies and working relationships with them and their organizations. The eight states, including West Virginia, which currently have group malpractice plans in conjunction with Aetna Life and Casualty found a discussion involving their representatives and Aetna officials rewarding and fruitful. This type of meeting, instituted during the AMA clinical convention in Hawaii last fall, will again be held during this year's clinical sessions, set for Philadelphia in December.

A round-table type of discussion arranged by the organization of state medical society presidents offered opportunities for an exchange of ideas and activity in areas ranging from professional liability to Federal and other regulatory problems. The one message that kept coming through, over and over again, was: "Doctor, get involved!"

Now, a few words about our Association's own meeting coming up at The Greenbrier this month. Pre-registration has been heavy. There will be several innovative features, with some new sections, including that involving the emergency physicians, adding significantly to the program.

The social event deserving our particular support is the dinner-dance, plus entertainment, arranged by our Woman's Auxiliary for Friday evening, August 20, under the direction of Mrs. Robert R. Weiler, the Auxiliary's President, and Mrs. Robert J. Reed III, both of Wheeling. This and other features of the Annual Meeting are covered in detail in this Convention issue of *The Journal.*

Having had an early overview of the planned scientific and other activities, I can proudly say to the entire Program Committee: "Well done!"

See you at The Greenbrier.

Jack Leckie

JACK LECKIE, M. D., *President*

THE WEST VIRGINIA MEDICAL JOURNAL

Official Organ of the West Virginia State Medical Association

The Publication Committee is not responsible for the authenticity of opinion or statements made by authors or in communications submitted to this Journal for publication. The author or communicant shall be held entirely responsible.

Published monthly on the first day of the month, at Charleston by the West Virginia State Medical Association. Original articles are accepted on condition that they are contributed exclusively to the Journal. Advertising rates furnished on request.

Address all communications to Business Manager, West Virginia Medical Journal, Box 1031, Charleston, West Virginia 25324. Phone 346-0551.

EDITORIALS

A YEAR OF PROGRESS, BUT MUCH TO BE DONE

This is the annual convention issue of The Medical Journal—and it in effect signals the end of another year in Medical Association history. It has been a busy, often hectic period of perhaps unprecedented challenge. On the positive side, some headway in a number of important areas has been made. But the other side of the coin promises additional and probably higher hurdles ahead which medicine—not only in West Virginia but everwhere across the nation—must conquer.

At the Annual Meeting at The Greenbrier this month, the Association presidency will pass from Dr. Jack Leckie of Huntington to Dr. John J. Mahood of Bluefield. Doctor Leckie will hand over the chief executive's responsibilities and become Chairman of the Association Council after an aggressive, tireless 12 months of dedicated service. Doctor Mahood will bring to the presidency solid experience gained as a long-time component society secretary, and as a member of Council; and a reputation for integrity and dedication now more necessary than ever before in such a position of leadership.

Doctor Leckie began and ended his year on the same strong and vital note—a call for more involvement, and for more concern and attention on the part of physicians, with regard to the many things going on about them that seriously threaten their rights and capabilities to provide proper and effective care for their patients.

For personal involvement in legislative activities, Doctor Leckie certainly established some new Association highs. The year also brought increased participation by physicians, in general, in legislative matters—and while the results were not always what might be desired, a new base hopefully has been laid for broadened and more intensive future efforts.

The past year's "plus" column contains a number of significant items, including continued strengthening of the Association's administrative and financial structure, and development of three new specialty sections, in dermatology, emergency medicine and nuclear medicine, within the overall organization.

Stepped-up committee activity has touched such areas as medical aspects of sports; home health and related care, and positive steps toward

Jack Leckie, M. D., President

development of new and uniform standards for evaluation of physical impairment in the Workmen's Compensation program.

Formal establishment of physician review panels in the loss control and education segment of the Association's group professional liability program operated with Aetna Life and Casualty has produced some encouraging early results and response. Continued work with the state's executive and legislative branches toward new legislation in the liability insurance area remains as one of the major tasks ahead.

Medical education efforts have been further expanded in the past 12 months, again calling attention to the really close ties between the Association's business sessions and scientific programs each August at The Greenbrier. This year's scientific program was designed by Dr. Robert D. Hess of Bridgeport and his Program Committee with an objective of providing good, practical subject matter. Significantly, there has been an increase in the number of scientific programs also arranged by sections and societies affiliated with the Association.

The end of a year, however, really means just one thing—the beginning of another. The Medical Association's membership is at an all-time high. Potentially, it has more personal and other resources than at any time in its history. What it does with this potential will lie with its leadership and administrative staff, to be sure—but no potential ever can be fully developed without all-hands help and cooperation.

The leadership will be calling on each physician for that kind of assistance.

INTRACRANIAL ANEURYSM, THE WARNING EVIDENCE

Subarachnoid hemorrhage is a death dealing condition. In approximately one-half of cases this type of bleeding is due to the rupture of an intracranial saccular or so-called berry aneurysm. Since the natural mortality rate from this cause is nearly 50 per cent, it is imperative, whenever possible, to recognize the premonitory manifestations before a calamitous hemorrhage develops. While a variety of warning symptoms have been described, the most common symptom is headache, and this may or may not be accompanied by vomiting. The next most common is disturbance of consciousness, and this may be fugitive or protracted. Cranial nerve involvement, especially the third cranial nerve, is another frequent development. Any age group is vulnerable, but the greatest incidence is from 40 to 60 years.

This headache appears de novo and even in those subject to headache it is of a different variety. Classically, the pain comes on abruptly with great fury. The victim often describes the onset as a sensation of something snapping or exploding in the head. The onset may be during exertion or repose. In many instances the headache is so violent and unyielding in character as to result in an urgent visit to the family physician or to a hospital emergency department. This is a symptom not to be ignored.

If the headache is associated with nuchal rigidity, bleeding is virtually certain. Whether or not there is stiffness of the neck, a patient with this clinical picture must be presumed to have suffered an intracranial hemorrhage unless determined otherwise. Prompt lumbar puncture will confirm the diagnosis if blood is found in the cerebrospinal fluid. The diagnosis may be overlooked and made difficult if lumbar puncture is delayed until the blood has been absorbed. The patient who rapidly develops ptosis, an unresponsive pupil, and orbital or supraorbital pain very likely has an expanding aneurysm which will be subject to early bleeding.

Warning symptoms have been reported to be present before a major hemorrhage in more than half of patients with intracranial aneurysms but, unfortunately, the onset is often totally unpredictable or the warning evidence is not recognized. The final diagnosis of aneurysm is made by angiography. Treatment when an aneurysm is the cause for bleeding may be of many types, but treatment, whenever feasible, if cure is to be effected, is by surgical exclusion or obliteration of the aneurysmal sac. By recognition of early manifestations and prompt appropriate management, the patient has the best opportunity to avoid a catastrophically fatal hemorrhage.

Assessing Heart Damage Size Goal of Researchers

In addition to seeking ways of preventing health problems, biomedical researchers must also acquire the knowledge necessary in determining to what extent some of these problems cause damage to an organism so steps may be taken to prevent further complications.

A group of 19 researchers at the Medical College of Ohio is doing just that with an effort to develop a technique to determine how much heart muscle tissue is destroyed in heart attacks. The work, which initially will involve laboratory animals, is aimed at trying to determine the size of damaged tissue areas through standardized procedures.

GENERAL NEWS

Drs. Tenley Albright, Richard Palmer Headliners For Annual Meeting

Drs. Tenley E. Albright of Boston and Richard E. Palmer of Alexandria, Virginia, will be featured speakers during the 109th Annual Meeting of the West Virginia State Medical Association this month.

Doctor Palmer was installed as the American Medical Association's 131st President in June. He will address the first session of the Association's House of Delegates at 2:30 P.M. on Wednesday, August 18—opening day for the Annual Meeting at The Greenbrier in White Sulphur Springs.

Doctor Albright, general surgeon and the first American to win the Olympic Gold Medal in women's figure skating in 1956, will deliver the fourth annual "Thomas L. Harris Address" as the keynote speaker for 9 A.M. opening exercises on Thursday preceding the first general scientific session. This session and all other scientific sessions will be held in the Greenbrier theater.

This year's Annual Meeting will see the addition of a special program on malpractice, scheduled Thursday afternoon, August 19. There will be an increased number of Association sections and affiliated societies holding breakfast and other meetings; and three additional specific areas of medical practice—dermatology, nuclear medicine and emergency medicine—will seek formal designation as sections.

The Annual Meeting will continue through Saturday afternoon, August 21, when Dr. John J. Mahood, Bluefield dermatologist, will be installed as Association President during the second and final session of the House of Delegates. Doctor Mahood will succeed Dr. Jack Leckie of Huntington as President.

Doctor Palmer was Chairman of the AMA's Board of Trustees from October, 1973, before being chosen President Elect in 1975. He previously had been Vice Chairman. Prior to being elected to the Board in 1969, he was a member of the AMA's Council on Medical Service and its committees on Health Care of the Poor and Government Medical Services.

He earned his A.B. and M.D. degrees at George Washington University in Washington, D. C., and interned at the University Hospital. He was a senior resident in pathology there in 1948-49 and, since 1963, has been Associate Clinical Professor at the University's school of medicine.

Since 1949, he has been a pathologist at Alexandria Hospital, where he was President of the medical staff in 1953. He also has been a pathologist at Circle Terrace Hospital Laboratory in Alexandria since 1955, and was President of the medical staff there in 1958. Since then, he has served on the hospital's board of directors.

A Past President of the International Academy of Pathology, Doctor Palmer also has been President of the Alexandria Society (1955); American Society of Clinical Pathologists (1961-62); Medical Society of Virginia (1964); George Washington University Medical Alumni Association (1965-66); and the Private Practitioners of Pathology Foundation (1966-67).

He is a Diplomate of the American Board of Pathology and is now serving his second six-year term as one of its trustees. He currently is a member of the Board's Executive Committee. He is a life member of the American College of Physicians.

In 1968, he won an American Pathology Foundation award for meritorious service to pathology, and received the George Washington University Alumni Achievement Award in 1971.

Doctor Palmer was Chairman of the Board of Commissioners of the Joint Commission on Accredi-

Richard E. Palmer, M. D.

Convention Timetable

The first general scientific session will follow 9 A.M. opening exercises on Thursday, August 19. The Friday session will begin at 9:30 A.M., and the session on Saturday, at 9 A.M.

The first session of the House of Delegates will be on Wednesday afternoon, August 18, beginning at 2:30. The second session will be on Saturday afternoon beginning at 2:30.

tation of Hospitals from 1970 to 1972. He was the 1974 recipient of the Pathologist's Distinguished Service Award jointly presented by the American Society of Clinical Pathologists and the College of American Pathologists.

He is a member of the College of American Pathologists, the American Society of Clinical Pathologists, the American Association of Blood Banks and the American Society of Nuclear Medicine.

Doctor Albright, who also was the first woman to win the World Figure Skating Championship in 1953, practices surgery in Boston in association with Dr. Hollis L. Albright, her father, and Dr. Nile L. Albright, her brother.

She served a surgical residency at Beverly (Me.) Hospital and a preceptorship with her father.

Doctor Albright, mother of three, won the World Figure Skating Championship in 1955 as well as 1953, and was National Champion from 1952 through 1956. She currently is a member of the Executive Committee of the U. S. Olympic Committee, and has maintained continuing interest and activity in sports through a variety of other appointments and memberships.

She is a member of the Board of Directors of the American Cancer Society, a Life Member of the NAACP, and Honorary President of the Campfire Girls Council for Greater Boston.

Doctor Albright is the recipient of a number of honorary degrees and citations, including:

Doctor of Science, Hobart & William Smith Colleges (1965), Geneva, New York; Doctor of Humanities, New England School of Law (1975), Boston; Ice Skating Institute of America Hall of Fame (1974); American Academy of Achievement Honoree (1976); U. S. Figure Skating Association Hall of Fame (1976); and Emanuel College (Distinguished Bostonian), 1976.

Luncheon for Past Presidents

A luncheon honoring Past Presidents of the West Virginia State Medical Association will be held at The Greenbrier on Thursday, August 19, during the 109th Annual Meeting.

William E. Gilmore of Parkersburg, Immediate Past President, will preside, and invitations have been extended to all the Association's Past Presidents.

Tenley E. Albright, M. D.

Presidential Address

Doctor Leckie, a Huntington family physician who is Director of Emergency Services of St. Mary's Hospital, will deliver his address as the retiring Association President prior to the installation of Doctor Mahood at the final House session on Saturday afternoon.

Pre-Convention Meetings

The Association's Council will have a pre-convention meeting at 9:30 A.M. on Wednesday, August 18. Its Chairman, Dr. William E. Gilmore of Parkersburg, will preside. The first House session will follow in Chesapeake Hall at 2:30 P.M. Doctor Leckie will be presiding officer.

From 6:30 to 7:30 P.M. on Wednesday, a President's Reception for Honor Guests will be held on the Old White Patio.

General Scientific Sessions

As noted, all three of this year's general scientific sessions will be held in the Greenbrier theater, with the first to follow 9 A.M. opening exercises on Thursday, August 19. The other two sessions will be at 9:30 A.M. on Friday and 9 A.M. on Saturday.

John J. Mahood, M. D.

Many of the guest speakers have accepted invitations to present talks at meetings of the sections and affiliated societies of the Association, most of which are scheduled as Friday breakfast meetings.

Scientific Exhibits

The scientific exhibits will be located in Eisenhower Hall, Parlors A and B, adjacent to the theater. Physicians, members of the Auxiliary and their guests are urged to visit the exhibits, which will be open from 8:30 A.M. to the close of the morning sessions.

Formal Opening Exercises

Doctor Leckie will call the Annual Meeting to order at the 9 A.M. session on Thursday, with Dr. Joe N. Jarrett of Oak Hill to give the invocation. Doctor Leckie will make welcoming remarks and Dr. Robert D. Hess of Bridgeport, the 1976 Program Committee Chairman, and other members of his committee, will be introduced. The first general scientific session will be held following the address by Doctor Albright.

Dr. N. LeRoy Lapp of Morgantown, Associate Professor of Medicine and Assistant Dean for Continuing Education at the West Virginia University School of Medicine, will serve as moderator for the "Symposium on Pulmonary Diseases." The speakers and their topics will be:

Richard B. Hornick, M. D., Professor and Director, Division of Infectious Diseases, University of Maryland School of Medicine, Baltimore, "Viral Infections of the Lung;" Paul M. Stevens, M. D., Professor of Medicine and Chief, Pulmonary Section, Baylor College of Medicine, Houston, "Recent Advances in the Therapy of Chronic Reversible Airway Obstruction;" and Eugene J. Linberg, M. D., Thoracic, Vascular and Abdominal Surgeon, Naples, Florida, "Surgical Physiology of Pulmonary Disease."

Eugene J. Linberg, M. D.

Thursday Afternoon

A luncheon honoring Past Presidents of the State Medical Association will be held at 12:30 P.M. Thursday in the Tyler Room, with Doctor Gilmore scheduled to preside. The Association's Resolutions Committee, with Dr. Richard E. Flood of Weirton presiding, will meet at 2 P.M. Thursday in the West Virginia Room.

The special program on malpractice, "The Growing Malpractice Scene," is scheduled for 2 P.M. in the theater. The presentation will be made by Mr. D. John Pecorino of Hartford, Connecticut, Manager of the Commercial Lines Department-Field Operations of Aetna Life and Casualty. Dr. Lyle D. Vincent of Parkersburg, Chairman of the Association's Insurance Committee, will preside.

Friday Breakfast Meetings

All but one (to be noted) of the Friday morning breakfast meetings will begin at 7:45 o'clock. The meetings, speakers (where scheduled) and their topics follow:

West Virginia Academy of Ophthalmology and Otolaryngology, Dr. Richard D. Richmond of Beckley presiding, Washington Room, Virginia Wing;

Section on Internal Medicine, Dr. Harold Selinger of Charleston presiding; Questions and Answers Dealing with Pulmonary Diseases: Richard B. Hornick, M. D., Baltimore; and Paul M. Stevens, M. D., Houston; Lee Room, Virginia Wing;

West Virginia Obstetrical and Gynecological Society and Section on Urology, Robert P. Pulliam,

House of Delegates To Meet Twice During Meeting

The first session of the House of Delegates during the Annual Meeting at The Greenbrier will be convened at 2:30 P.M. on Wednesday, August 18. The second and final session of the House of Delegates will be held at 2:30 P.M. on Saturday, August 21.

The 1976 Program Committee

Dr. Robert D. Hess of Bridgeport is Chairman of the Program Committee for the 109th Annual Meeting of the West Virginia State Medical Association. Other members of the Committee are Drs. Carl B. Hall of Charleston, John J. Mahood of Bluefield, Robert P. Pulliam of Beckley, Lyle D. Vincent of Parkersburg, and Alvin L. Watne of Morgantown.

M. D., of Beckley, and A. Thomas McCoy, M. D., of Charleston, presiding; "The Numb Bottom: A Historical Approach," Thomas H. Joyce III, M. D., Cincinnati; Tyler Room;

West Virginia State Society of Anesthesiologists (*7:30 A.M.*), Richard B. Knapp, M. D., of Morgantown, presiding; "Medical Malpractice and Anesthesiology," Carl Wasmuth, M. D., Director of Anesthesiology, Cleveland Clinic; Pierce Room;

Section on Orthopedic Surgery, Tony C. Majestro, M. D., of Charleston, presiding; "Pathogenesis and Treatment of Perthes Disease," Robert N. Clark, M. D., Chairman and Professor of Orthopedic Surgery, West Virginia University School of Medicine; Jackson Room;

Section on Surgery, Walter E. Klingensmith, M. D., of Beckley, presiding; Eugene J. Linberg, M. D., Naples, Florida; Buchanan Room;

West Virginia Section, American College of Nuclear Medicine, Steven A. Artz, M. D., of Charleston, presiding; "The Current State of the Art in Radio-Pharmaceuticals," Gerald A. Bruno, Ph. D., Director, Diagnostics Research and Development Department, E. R. Squibb & Sons, New Brunswick, New Jersey; Directors' Room; and

Section on Dermatology, William D. McLean, M. D., of Beckley, presiding; Eisenhower Hall, Parlor C.

Second General Session

Dr. Herbert H. Pomerance of Charleston will be the moderator at the second general scientific session beginning at 9:30 A.M. on Friday, with the speakers and their topics to include:

William A. Neal, M. D., Assistant Professor of Pediatrics, WVU, "Regionalization of Perinatal Care in West Virginia;" Thomas H. Joyce III M. D., Associate Professor of Anaesthesia and Obstetrics and Gynecology, University of Cincinnati Medical Center, "A Broad Review of Obstetrical Anaesthesia;" and Philip R. Nader, M. D., Associate Professor of Pediatrics and Psychiatry and Director, School Health Programs, University of Texas Medical Branch, Galveston, "Children, Schools and Doctors."

No Registration Fee for Members

Members of the West Virginia State Medical Association will not be assessed a registration fee in connection with the 109th Annual Meeting at The Greenbrier in White Sulphur Springs, August 18-21.

Interns, residents and medical students also will be registered without charge.

There will be a registration fee of $50 for out-of-state physicians attending the meeting.

Nominating Committee to Meet On Friday, August 20

The State Medical Association's Committee on Nominations will hold a 5 P.M. meeting on Friday, August 20, in the Lee Room of The Greenbrier.

The Committee will make nominations to the House of Delegates for President Elect, Vice President and Treasurer, and for Delegate and Alternate Delegate to the American Medical Association.

Association By-Laws also provide that nominations may be made from the floor for these offices, to be filled by the House in balloting at its final session on Saturday, August 21, the final day of the Association's 109th Annual Meeting.

Dr. Worthy W. McKinney of Beckley will serve as Chairman of the Committee on Nominations, with other members to include: Joseph T. Mallamo, Fairmont; L. Walter Fix, Martinsburg; L. H. Nefflen, Elkins; Lyle D. Vincent, Parkersburg; Harold N. Kagan, Huntington; and Ray M. Kessel, Logan.

In addition, one of the Kanawha Medical Society's two Councilors will serve on the Committee under provisions of the By-Laws. That representative will be Dr. J. L. Mangus of Charleston.

Schedule For Friday Afternoon

The West Virginia Chapter, American Academy of Pediatrics will meet at 2 P.M. in the Fillmore Room, with Dr. Herbert H. Pomerance of Charleston presiding. The guest speaker will be Doctor Nader, whose topic will be "Learning Disabled—Mislabeled."

Dr. Jerry A. Maliska of Charleston will preside at a meeting of the West Virginia Chapter, American College of Emergency Physicians, at 2 P.M. in the West Virginia Room. The speakers and their topics will be:

Harris B. Graves, M. D., President, American College of Emergency Physicians, Lansing, Michigan, "American College of Emergency Physicians: Past, Present and Future;" Frederick M. Cooley, M. D., of Charleston, Medical Director, West Virginia Division of Emergency Services, "West Virginia Emergency Medical Services;" and Richard W. Moriarty, M. D., of Pittsburgh, "Poisonings."

The West Virginia Chapter, American Society of Internal Medicine, will meet at 4 P.M. in the Jackson Room, with Dr. John F. Otto, Jr., of Huntington, presiding.

Also meeting at 4 P.M., in the Directors' Room, will be the West Virginia District Branch, American Psychiatric Association, with Dr. Florence K. Hoback of Huntington presiding. The guest speaker will be Frank J. Ayd, Jr., M. D., Chief of Psychiatry, Franklin Square Hospital, Baltimore, whose subject will be "The Current Status of Psycho-Pharmaco-Therapy."

The Association's Committee on Nominations will meet at 5 P.M. in the Lee Room, Virginia Wing, with Dr. Worthy W. McKinney of Beckley presiding.

Saturday Morning Schedule

The Board of Trustees of the West Virginia Medical Institute, Inc., will meet at 7:45 A.M. Saturday in the Pierce Room, with Dr. Harry S. Weeks, Jr., of Wheeling, presiding.

Also meeting at 7:45 A.M., in the Buchanan Room, will be the West Virginia Radiological Society, with Dr. James T. Smith of Charleston presiding. The guest speaker will be John A. Goree, M. D., Professor of Radiology and Chief, Section of Neurologic Radiology, Duke University Medical Center, whose topic will be "Some Aspects of Emergency Radiologic Examination of the Head and Neck."

Dr. Richard E. Flood of Weirton will be moderator for the third general scientific session beginning at 9 A.M. Saturday. Doctor Flood, Physician Member of the National Joint Practice Commission, also will join with Elizabeth A. O'Connell, R. N., Professor of Nursing, WVU, for a discussion of "The Joint Practice Commission and Quality Care."

The other speakers and their topics for this scientific session will include:

Richard W. Moriarty, M. D., Assistant Professor, Department of Pediatrics, University of Pittsburgh and Director, National Poison Center Network, Children's Hospital of Pittsburgh, "Poisonings—Some New Concepts and Some Old Ones Revisited;" Thomas L. Stern, M. D., Director, Division of Education, American Academy of Family Physicians, Kansas City, Missouri, "Motivation and Preparation for Becoming a Teacher;" and George R. Callender, Jr., M. D., of Charleston, Medical Director of the West Virginia Medical Institute, Inc., "The Physician and Professional Standards Review."

Pathologists To Meet

The West Virginia Association of Pathologists will meet at 12:30 P.M. in the Pierce Room, with Dr. John P. Shields of Huntington presiding.

Second House of Delegates Session

Doctor Leckie again will be the presiding officer at the second and final House of Delegates session in Chesapeake Hall at 2:30 P.M. on Saturday.

Along with his Presidential Address and the installation of Doctor Mahood, the agenda will include election of other Association officers and consideration of several business items.

Medical School Alumni Events

Cocktail parties will be held by the West Virginia University School of Medicine's Alumni Association Thursday evening, and by the University of Virginia Medical School Foundation and the West Virginia Chapter, Medical College of Virginia Alumni Association, Friday evening.

Dr. Clark K. Sleeth will be in charge of the WVU festivities in the West Virginia Room Thursday at 6 P.M. Drs. McLemore Birdsong, James C. Respess, J. Brookins Taylor and William C Morgan will serve in the same role for the University of Virginia affair at the same hour Friday evening in the Chesapeake Bay. Dr. Thomas J. Janicki of Charleston will be in charge of the Medical College of Virginia event at 6:30 P.M. Friday on the Old White Patio.

Friday Auxiliary Dinner Dance

Departing from the 10 P.M. ball held in previous years, the Woman's Auxiliary to the State Medical Association this year has scheduled "Gala Affair," a banquet and dance (music by "Gingerbread," Pittsburgh), in Colonial Hall beginning at 8 P.M. The Ohio County Auxiliary will be hostess, with Mrs. Robert J. Reed III of Wheeling serving as Chairman. Dr. and Mrs. M. V. Kalaycioglu of Shinnston will serve as hosts during intermission. All physicians, their wives and others registered for the State Medical Association convention are invited.

Saturday Evening Reception

New and continuing officers of the State Medical Association will be honored at a cocktail party and reception from 6:30 to 7:30 P.M. Saturday on the Colonial Hall Terrace. All members of the Association and Auxiliary and their families, representatives of scientific exhibitors and convention guests are cordially invited.

Advance Registration Heavy

Advance registration for the Annual Meeting at The Greenbrier has been heavy. As this issue of *The Journal* went to press, more than 600 persons had made reservations.

WVU Resident SMA Loan Recipient

Walter R. Warren, M. D., of Morgantown has been named recipient of a Southern Medical Association residency training loan. Doctor Warren, a resident in neurology at the West Virginia University School of Medicine, was one of eight physicians selected for the loans from throughout the organization's territory of 16 southern states and the District of Columbia. Each year SMA awards grants and loans to enable physicians to continue their residency training.

State Medical Association Lists Names of New Members

The following is a list by component societies of new members of the West Virginia State Medical Association elected from January 1 through June 30, 1976:

Cabell

Raymond H. Curry — Barboursville
Charles W. Dennison — Huntington
Robert Russell Dennison, Jr. — "
Charles R. Holt — Parkersburg
Talmadge R. Huston — Huntington
Walter W. Jones — "
Stephen I. Lester — South Point, Ohio
Farroq H. Siddiqi — Huntington

Eastern Panhandle

Edward William Catalano — Martinsburg
David Lloyd Grode — "

Fayette

Pedro L. Casingal — Montgomery
Imran Hameed — Oak Hill
A. M. Mirza — Montgomery
Benjamin P. Ocampo — "
B. S. Realica — "
E. S. Romero — Charleston
Yolanda A. Santos — Oak Hill
Tien-Sheng Tu — Montgomery

Hancock

Jaswinder K. Chattha — Weirton
John E. Holman — Steubenville, Ohio
Jugender K. Luthra — Weirton
John W. Metcalf, Jr. — Steubenville, Ohio
Sarjit Singh — Weirton
Elmo R. Tamayo — Newell

Harrison

Robert McCune, Jr. — Grafton
Donald McDowell — Clarksburg
Carlos A. Naranjo — "
Kenrick Roberts — Sugar Grove

Kanawha

Lalit S. Agrawal — East Bank
Kanoj K. Biswas — South Charleston
Teresita G. Bitanga — " "
Abel P. Borromeo — Charleston
Mohammed M. Boustany — "
Angel M. Cinco — South Charleston
Anthony W. Graham — St. Albans
Samuel L. Henson — Hurricane
G. Paul Hlusko — Charleston
Martin J. Kommor — "
Vinodrai B. Lakhani — "
Han Seng Lee — "
German Lizarralde — "
Daniel B. MacCallum — "
Shivji L. Magunia — "
Isaac I. Matta — "
Ben David Muldong — Montgomery
Mohammad Shafi — Charleston
James M. Stevenson — "
A. Frank Thompson, Jr. — Belle
G. Fred Van Winkle — South Charleston
David K. Walker — Charleston
Stafford G. Warren — "

Logan

Khaja N. Ahmed — Man
John J. Francis — "
Sheikh J. Hasan — "
Leonte E. Natera — Mt. Gay
Ekambaram Parameswaran — Man

Marion

A. M. Bakhos — Fairmont
Jacob Jacob — "
Alfredo N. Munoz — "
Pravinchandra I. Petel — "
Grace M. Reynolds — "

McDowell

Napoleon N. Capili — Welch
Florencio P. Neri, Jr. — "
Braulio P. Rollan — "
Dev D. Sharma — "

Mercer

Suradech Kongkasuwan — Bluefield
Edward Litz — "
Nara S. Naidu — Princeton
Louise A. Owens — Bluefield
Kishor S. Pathak — Princeton
Adnan Silk — Bluefield
Demosthenes Soulis — "

Mingo

Song Kee Kim — Williamson
William L. Mossburg — "

Monongalia

Stephen R. Amato — Morgantown
Anthony G. DiBartolomeo — "
James R. Gaskell — "
William R. Hobbs — "
Josefina M. Orteza — "

Ohio

Larry Dodd — Wheeling
Hugo L. Ramirez — "
Robert S. Salisbury — "

Parkersburg Academy

Jeffrey S. Chase — Parkersburg
Joseph Freydinger — "
Michael A. Morehead — "
Carl E. Nichols — "
Bruce H. Pierson, Jr. — "
John A. Rurak — "
Harry Lee Shannon — "
Terrence Steiner — "

Potomac Valley

Karl J. Reckenthaler — Petersburg
Richard Updegraff — Moorefield
Virginia A. Updegraff — "

Preston

Hilton C. Rocha — Hopemont

Raleigh

Joshy Abraham — Beckley
Anna Katharine Kiehl — "
John W. Rackey — "
Syed Rasheed — "
T. Rosal Rojas, Jr. — "
Raul Tamayo — "

Tygart's Valley

Charles L. Arnett — Philippi
Michael M. Stump — Elkins
James V. Terrano — Dailey
A. Richard Weaver — Philippi

Auxiliary Completes Program For 52nd Annual Meeting

Mrs. Norman H. Gardner of East Hampton, Connecticut, will be among honor guests when the Woman's Auxiliary to the West Virginia State Medical Association holds its 52nd Annual Meeting at The Greenbrier in White Sulphur Springs August 18-21.

Mrs. Norman H. Gardner

The meeting again will be held concurrently with the Annual Meeting of the State Medical Association. Mrs. Gardner was installed in Dallas in June as the new President of the Woman's Auxiliary to the American Medical Association.

Also addressing the Auxiliary will be Mrs. Gordon Dees of Jackson, Mississippi, President of the Woman's Auxiliary to the Southern Medical Association.

More than 200 wives of physicians are expected to attend the Auxiliary's business sessions, over which Mrs. Robert R. Weiler of Wheeling, the State Auxiliary's President, will preside.

Pre-Convention Meetings

An invitation has been extended to all Auxiliary members to attend the first session of the State Medical Association's House of Delegates on Wednesday, August 18, at 2:30 P.M. Dr. Richard E. Palmer of Alexandria, Virginia, President of the American Medical Association, will be the principal speaker.

Mrs. Weiler then will preside at a 4 P.M. pre-convention Auxiliary Board meeting in the Fillmore-Van Buren Rooms.

Opening Convention Exercises

Members of the Auxiliary also have been invited to attend formal opening ceremonies of the State Medical Association's 109th Annual Meeting at 9 A.M. on Thursday, August 19, in the Greenbrier's theater. Dr. Tenley E. Albright of Boston, general surgeon and the 1956 Olympic Gold Medal winner in women's figure skating, will deliver the fourth annual "Thomas L. Harris Address."

Following the opening exercises, the Auxiliary members will go to the Fillmore-Van Buren Rooms for the formal opening of their convention, with Mrs. Weiler in charge.

First General Session

The keynote address by Mrs. Gardner will highlight the initial session at 9:45 A.M. Dr. Jack Leckie of Huntington, President of the State Medical Association, will be recognized for brief remarks.

Mrs. Norman H. Gardner

Active in all levels of Auxiliary work, Mrs. Gardner previously served one term as First Vice President, two terms as Eastern Regional Vice President, and as Director, Constitutional Secretary, Historian, Chairman of the Program Committee, Chairman of the Rural Health Committee, and member of the Communications and Executive committees.

Her experience in auxiliary work was derived from years of achievement in her state and county auxiliaries. She served on her state board for six years before becoming President in 1962. Two terms as Parliamentarian preceded her chairmanship of the Community Service and Rural Health committees in 1965-66. She was editor of *The Connecticut Quartery* for three years and served as President of her county auxiliary in 1959.

Under Mrs. Gardner's guidance, the auxiliary will stress the increasing of membership and fully involving all members in the programs of the auxiliary. Community, family and international health education projects, organized into the clearinghouse format of the Project Bank, will help the auxiliary to work for better health education for everyone. Auxiliary emphasis will also focus on legislation, communications, and fund raising for the American Medical Association Education and Research Foundation.

Mrs. Gardner is a graduate of Simmons College in Boston. She taught home economics, her chosen field, for two years before her marriage. She and the late Doctor Gardner lived in the same house in East Hampton for 40 years, making additions as the four now-grown children—Cynthia, Sherrill, Norman, Jr., and David—were born. All four of the children are married, and Mrs. Gardner has nine grandchildren.

Mrs. Gardner's civic activities extend into many areas of community, political and church work. She was elected to the local school board for seven years and served as Secretary of the School Building Committee, as well as being a member of the PTA and working with the Girl Scouts.

Other Opening-Session Items

Other opening-session items will include the introduction of the convention Co-Chairmen, Mrs. Howard G. Weiler and Mrs. Robert T. Bandi of Wheeling; reports from officers and committee chairmen, recommendations from the pre-convention Board meeting, election of the 1977 Nominating Committee, and introduction of component Auxiliary Presidents by the Regional Directors.

Bridge, Past Presidents' Breakfast

A bridge tournament beginning at 2:30 P.M. will be held on Thursday in the Trellis Lobby. The Harrison County Auxiliary will serve in a hostess role, with Mrs. Robert D. Hess of Bridgeport as Chairman.

Mrs. Robert R. Weiler

At 8 A.M. on Friday, August 20, the Past Presidents' Breakfast will be held, with Mrs. William T. Lawson of Fairmont, Immediate Past President of the State Auxiliary, presiding.

Second General Session

The Second General Session at 9:45 A.M. on Friday in the Fillmore-Van Buren Rooms again will have Mrs. Weiler presiding with a highlight to be the address by Mrs. Dees.

Other activities will include the presentation of the AMA-ERF Awards to the Auxiliary by Dean John E. Jones, M. D., of the West Virginia University School of Medicine, and Mrs. Paul Francke, Jr., of Charleston, State Chairman.

Mrs. Gardner will install Mrs. J. L. Mangus of Charleston as the new Auxiliary President. Other officers will be elected after a report from the Nominating Committee, and Mrs. Weiler will receive the Past President's Pin from Mrs. Lawson. Mrs. Mangus will deliver her inaugural address.

Friday Social Functions

The Marion County Auxiliary, with Mrs. Joseph T. Mallamo of Fairmont serving as Chairman, will be hostess for golf on Friday afternoon, and the Raleigh County Auxiliary, with Mrs. C. Richard Daniel of Beckley as Chairman, will be hostess for tennis, also on Friday afternoon.

Departing from the 10 P.M. ball held in previous years, the Auxiliary this year has scheduled "Gala Affair," a banquet and dance (music by "Gingerbread," Pittsburgh), in Colonial Hall beginning at 8 P.M. The Ohio County Auxiliary will be hostess, with Mrs. Robert J. Reed III of Wheeling serving as Chairman. Dr. and Mrs. M. V. Kalaycioglu of Shinnston will serve as hosts during intermission. All physicians, their wives and others registered for the State Medical Association convention are invited.

Post-Convention Board Meeting

Mrs. Mangus will preside at the post-convention conference and Board meeting at 10 A.M. on Saturday, August 21, in the Fillmore-Van Buren Rooms.

Saturday Afternoon Agenda

Auxiliary members are invited to attend the second and final session of the State Medical Association's House of Delegates on Saturday at 2:30 P.M., at which time Dr. John J. Mahood of Bluefield will be installed as the Association's President, and other Association officers will be elected.

Other Convention Matters

Those Auxiliary members who plan to participate in bridge, golf and tennis are urged to sign up in advance at the registration desk.

Kidney Foundation Outlines Organ Donation Effort

The Kidney Foundation of West Virginia, Inc., an affiliate of the National Kidney Foundation, will be making specific efforts in coming months to reach physicians in an organ donor educational program—a project the Foundation has described as funded in part under an agreement with the West Virginia Department of Welfare.

Meanwhile, the Foundation has developed general information directed toward physicians relative to the donation of kidneys. Some of the pertinent sections of the prepared fact sheet follow:

"If a patient under a physician's care is facing imminent death, organ donation may provide the opportunity to save another life and lessen the personal sorrow of the dying patient's family and friends."

The foundation lists as "potential donor criteria" the anticipation of death; age three months to 60 years; comatose with respirator required; no sepsis or cancer (except primary brain tumor), and a situation in which donor and next of kin are amenable to kidney donation.

Transplant teams, the Foundation has explained, are on call 20 hours each day, and assistance is available in evaluation of donor suitability; obtaining donor permission; surgical removal; preservation, and transportation.

Physicians are urged, in the Foundation's program material, to take this action if a dying patient meets the donor criteria: maintain circulation and oxygenation; contact the family of the donor for per-

mission; and call (304) 348-4333 or 348-5432 at the Charleston Area Medical Center's Memorial Division in Charleston, and ask the operator for the nephrologist on call.

Further information relative to the donor program may be obtained from Kidney Foundation of West Virginia, 1216 Quarrier Street, Charleston 25301, phone (304) 342-5191.

Amendments To Constitution Subject To House Vote

In line with provisions of Article XIV of the State Medical Association's Constitution—that article dealing with amendment to the Constitution—the following two proposed amendments to be up for House of Delegates action at The Greenbrier on August 18 are again offered for review by the Association membership.

Also reprinted below is a proposed amendment to the Bylaws as offered to the House in 1975, but held over for action this year because of its direct relationship to the second proposed amendment to the Constitution related to classes of Association membership.

PROPOSED AMENDMENT TO THE CONSTITUTION

(To Be Acted Upon Finally
At the First Session of the House of Delegates
During the 1976 Annual Meeting)

Amend Article IV, Section 1, to read as follows:

Sec. 1. This Association shall consist of active, *retired* and honorary members.

Amend Article IV, Section 4, to read as follows:

Sec. 4. *Retired* and honorary members shall be those physicians qualified for such membership under the By-Laws of this Association.

(Adoption of this two-part amendment would provide a new category of *retired* members in the State Medical Association).

PROPOSED AMENDMENT TO THE CONSTITUTION

(To Be Acted Upon Finally
At the First Session of the House of Delegates
During the 1976 Annual Meeting)

Amend Article VI, Section 1, to read as follows:

Sec. 1. The Council shall consist of the elected Councilors from each district; the immediate Past President, who shall serve as Chairman; *his two immediate predecessors, who shall be the Senior and Junior Councilors-at-Large for one year;* and the President, the President Elect, the Vice President and the Treasurer. A majority of the members of the Council shall constitute a quorum. Their duties and responsibilities shall be defined in the By-Laws.

(Adoption of this amendment, with proposed new language underlined (italics here), would correct a current inconsistency between Constitution and By-Laws with regard to the Junior Councilor).

PROPOSED AMENDMENT TO THE BY-LAWS

Amend Chapter I, Section 6, by deleting the last two paragraphs and substituting the following:

The honorary membership of this Association shall consist of those physicians who have attained outstanding eminence in the medical profession; have been nominated for honorary membership by their component societies; and have been elected to such membership by a majority vote of the Council and the House of Delegates of the Association.

The retired membership of this Association shall consist of those physicians who have been active members of a state medical association for twenty-five (25) or more consecutive years; and who have retired from professional activity. Nominations for this category shall be forwarded by the appropriate component societies to the executive secretary for submission to Council for election.

Honorary and retired members shall be exempt from the payment of dues or assessments. They shall have the privilege of the floor in any open session of the Association, but shall not have the

Proposals For New Sections To Be Made To House

Three additional specific areas of medical practice—dermatology, nuclear medicine and emergency medicine—will seek formal designation as sections of the West Virginia State Medical Association during the August 18-21 annual meeting at The Greenbrier.

The Association's Constitution stipulates that the House of Delegates may provide for a division of the scientific work of the Association into appropriate sections; and for the organization of such societies as will promote the best interests of the medical profession.

Motions to set up the new sections will be made at an Annual Meeting session of the House on the part of a new state organization of dermatologists currently headed by Dr. William D. McLean of Beckley; the proposed West Virginia Section of the American College of Nuclear Medicine, spearheaded by Dr. Steven A. Artz of Charleston, and the West Virginia Chapter of the American College of Emergency Physicians, of which Dr. Jerry A. Maliska of Charleston is President.

right to make or second motions, to vote, or to hold any elective office in this Association, except that they may hold elective or appointive committee membership.

The Delegation of Authority, 'Dos' and 'Don'ts'

Under the legal doctrine of respondiat superior, a physician is clearly liable for the negligent acts of his employees. However, the solution is not necessarily in not delegating authority to others. The physician may actually lessen his chances of a malpractice claim if he does delegate time-consuming tasks to well-trained aids—freeing the physician to spend more time practicing quality medicine, Aetna Life and Casualty has explained.

"When an employee is hired make certain he or she is dependable," Aetna has advised. "If the person has had previous employment, check out the track record. Select an aide who knows how to establish and maintain rapport with patients. This is the cornerstone to good relations, and patients do not usually sue unless there has been a breakdown in rapport." Aetna has added:

"Select a qualified person. If possible, hire only a licensed person. An unlicensed aide must be trained and the training must be comprehensive and complete. If formal training is available, have the aide attend. Once trained, monitor his or her performance—do not take it for granted.

"Define the employee's duties in writing and document both training and performance. Have written orders not only on what the employee is allowed to do, but also as to what he or she is not permitted to do. Do not delegate functions that require the professional judgement of a physician.

"The physician should be sure that he is always available to be seen by any patient who wants to see him, and he should be sure his aide understands this. An aide should not be used to insulate the patient from the doctor.

"Telephone advice can be particularly hazardous if carried out by an aide—both to patients and when calling in prescriptions. It is better that the physician do it if at all possible. If it is done by an aide, the aide should keep a written record of the call and it should be checked by the doctor."

Special Program on Malpractice Set For Annual Meeting

A discussion of "The Growing Malpractice Scene" is scheduled for a special Thursday afternoon, August 19, program to be held during the West Virginia State Medical Association's Annual Meeting at The Greenbrier.

Using this topic will be Mr. D. John Pecorino of Hartford, Connecticut, Manager of the Commercial Lines Department - Field Operations of Aetna Life and Casualty Company. Dr. Lyle D. Vincent of Parkersburg, Chairman of the Association's Insurance Committee, will preside at the 2 P.M. session in the Greenbrier's theater.

The discussion has been arranged as a part of the Medical Association-Aetna group professional liability insurance program now being operated under a five-year agreement scheduled to extend through calendar 1977.

Mr. Pecorino's activities have included particular interests and responsibilities in the loss control and education segment of the group program, as a part of which the Medical Association has moved in recent months to set up an effective system of physician claims review panels.

"I shall endeavor to review some of the malpractice problems, touch on some of the highlights among developments around the country, and stress the loss control and education element of the Aetna program," Mr. Pecorino has explained.

All Association members are urged by the Program Committee to make every effort to attend this session, which will include time for questions and discussions of individual and general interest.

Dr. Richard V. Lynch, Jr. Honored By State Lung Association

Dr. Richard V. Lynch, Jr., of Morgantown, was presented the William L. Cooke Award by the West Virginia Lung Association during the organization's annual meeting held recently in Parkersburg.

The award is presented to a member of the medical profession in recognition of his years of service in the prevention and control of lung disease.

Dr. Richard V. Lynch, Jr., of Morgantown (right) receives the William L. Cooke Award from Everett E. Barnett of Philippi, now immediate Past President of the West Virginia Lung Association. Looking on is Carl C. Booberg of Charleston, Executive Director of the lung association.

From 1949 to 1968, Doctor Lynch specialized in the practice of internal medicine in Clarksburg. Since 1968, he has been an Associate Professor of Medicine at the West Virginia University School of Medicine, where he is in charge of the allergy clinic and the physician's assistant program held in conjunction with Alderson-Broaddus College.

Throughout his career, he has shared his guidance and leadership with several organizations. In addition to serving as President of the West Virginia Lung Association, Doctor Lynch has served as the President of the West Virginia Diabetes Association, the State Medical Association, and twice President of the West Virginia Thoracic Society. Currently, he is the Secretary of the American College of Chest Physicians, and a member of the executive committee of the West Virginia Lung Association Board of Directors. From its origin, he has been a member of the Comprehensive Health Planning Agency. While living in Clarksburg, he was a city councilman.

New Officers Elected

Bernard V. Kelly, Sr., of Weirton, was elected board President of the lung association during the annual meeting. Kelly is a safety engineer at the Weirton Steel plant and has been active in the work of the lung association for 20 years. He succeeds Everett E. Barnett of Philippi.

Other officers elected were E. Murray Taylor, Fairmont, President Elect; Dr. Dominic Gaziano, Charleston, Vice President; Mrs. Herman Canady, Dunbar, Secretary; James T. Miller, Charleston, Treasurer; and Dr. Ralph H. Nestmann, Charleston, Assistant Treasurer.

During the business meeting, the board passed a no-smoking policy for any lung association office or meeting.

Sports Activities Scheduled For Doctors, Auxiliary

Golf and tennis competition for both State Medical Association members and their wives again will be held in conjunction with the annual meetings of the Association and its Auxiliary at The Greenbrier this month.

There also will be a skeet-shooting tournament with Dr. O. M. Harper of Clendenin in charge.

Dr. L. Dale Simmons of Clarksburg is in charge of the Men's Medical Golf Tournament. He announced that there will be a $5 registration fee and competing physicians may play their rounds during any morning or afternoon on Thursday through Saturday, August 19-21. Specific starting times and other rules will be in effect with this year's golf play and those planning to take part should make sure they are familiar with those rules.

Competitors must inform the starter when they begin their official 18 holes of play. All tournament play must be completed by 4 P.M. on Saturday to permit the awarding of prizes during an evening reception honoring new officers of the State Medical Association.

Dr. William C Morgan, Jr., of Charleston, won low gross honors for physicians, and the first "leg" on a new trophy, in the tournament last year.

Mrs. Joseph T. Mallamo of Fairmont is Chairman of the Auxiliary's golf tournament which is scheduled for Friday afternoon, August 20.

Dr. Harold Selinger of Charleston will serve as Chairman of the men's tennis tournament for physicians on Thursday afternoon and Mrs. C. Richard Daniel of Beckley will be Chairman for the Auxiliary tournament on Friday afternoon. Competition in both tournaments will be limited to doubles and those interested in playing should register at the Pro Shop at the tennis courts.

Doctor Harper said winners in the skeet-shooting tournament will be named in the 12 gauge and 20 gauge competition, with a 50-bird shoot for each shotgun. He has advised interested physicians to furnish their own shotguns. There will be no registration fee.

'Urinary Tract Infections' Topic For Huntington Seminar

A Seminar on Urinary Tract Infections will be sponsored by St. Mary's Hospital (Huntington) and the Marshall University School of Medicine on Saturday, October 16, in Huntington. The site for the one-half day program will be the Downtown Holiday Inn.

The program will begin with registration at 8 A.M. and continue through 12:30 P.M., followed by an optional buffet luncheon and attendance at the Marshall University homecoming game.

Dr. Rafael E. Molina, Huntington urologist, will be the Program Director.

The seminar has been approved for three hours of credit in Category 1 of the Physician's Recognition Award of the American Medical Association; and application has been made for three hours of Elective credit by the American Academy of Family Physicians, and for three hours of CERP by the West Virginia Nurses' Association.

The fee for physicians will be $20 ($25 after October 1) and $10 for allied health personnel ($15 after October 1). Fees for the optional buffet luncheon and homecoming game will be $8.20 and $5 per person respectively. Checks should be made payable to the Department of Continuing Medical Education, Saint Mary's Hospital. Registrations and checks may be sent to: Saint Mary's Hospital, Department of Continuing Medical Education, 2900 First Avenue, Huntington 25701. For further information contact the hospital at the above address or phone (304) 696-2298.

The complete program will be listed in a future issue of *The Journal* (see July issue for faculty members).

Dr. Seigle W. Parks Wins Water Colors Award

Dr. Seigle W. Parks of Charleston—entering the 39-year-old competition for the first time—won a second place award in water colors at the American Physicians Art Association's annual exhibit in Dallas late in June.

The exhibit and competition was held concurrently with the American Medical Association's annual meeting. Doctor Parks won his award with a scene of Bear Rocks in the Dolly Sods area of Tucker County.

The Dallas judging was held June 26 by the Association, which was founded in 1936.

Parkersburg Physician Receives Mead Johnson Award

Dr. David W. Nesselroade of Parkersburg, now in a family practice residency at West Virginia University, was among 18 Mead Johnson Awards winners announced recently by the American Academy of Family Practice. He receives a certificate and $1,200.

The Academy's Mead Johnson Awards Committee evaluated 110 candidates for the 1976 awards, taking into consideration scholastic achievement; leadership qualities; qualification for, and interest in, family practice, and financial need.

Dr. Del Roy R. Davis (left) of Kingwood, WVU Clinical Professor and Past President of the West Virginia Chapter of the American Academy of Family Physicians, presents the AAFP's Mead Johnson Certificate of Award to Dr. David W. Nesselroade of Parkersburg, now entering his third year of family practice residency at the West Virginia University School of Medicine.

Medical Meetings

Aug. 1-7—Am. Institute of Uutrasound in Medicine, San Francisco.

Aug. 4-6—Am. Academy of Clinical Toxicology, Seattle.

Aug. 7—Ob-Gyn Day (Wheeling Div., WVU), Wheeling.

Aug. 17-20—International Society for Experimental Hematology, Washington, D.C.

Aug. 18-21—109th Annual Meeting, W. Va. State Medical Assn., White Sulphur Springs.

Sept. 9-11—Am. Assn. of Obstetricians & Gynecologists, Hot Springs, Va.

Sept. 15-17—Pa. Medical Society, Philadelphia.

Sept. 16-17—Hal Wanger Family Practice Conference, Morgantown.

Sept. 16-18—Medical & Chirurgical Faculty of the State of Md., Annapolis.

Sept. 23—Pediatric Day (Wheeling Div., WVU), Wheeling.

Sept. 20-23—AAFP, Boston.

Sept. 21-24—Am. Roentgen Ray Society, Washington, D. C.

Sept. 26-30—Kentucky Med. Assn., Louisville.

Oct. 6-9—Maryland Medical Staff Conference, White Sulphur Springs.

Oct. 6-10—Am. Academy of Ophthal. & Otolaryn., Las Vegas.

Oct. 8-9—Update '76 (Wheeling Clinic), Wheeling.

Oct. 9-14—Indiana State Medical Assn., Indianapolis.

Oct. 11-15—ACS, Chicago.

Oct. 11-16—Am. College of Emergency Physicians, New Orleans.

Oct. 16—Seminar on Urinary Tract Infections, Huntington.

Oct. 16-17—Am. College of International Physicians, Inc., Chicago.

Oct. 16-21—Am. Academy of Pediatrics, Chicago.

Oct. 24-26—Medical Society of the District of Columbia, White Sulphur Springs.

Oct. 24-28—Am. College of Chest Physicians, Atlanta.

Nov. 4-7—Medical Society of Virginia, Williamsburg.

Nov. 7-10—Southern Medical Assn., New Orleans.

Nov. 15-19—Am. Heart Assn., Miami Beach.

Dec. 4-8—AMA Clinical, Philadelphia.

1977

Jan. 28-30—Tenth Mid-Winter Clinical Conference, Charleston.

CONVENTION PROGRAM

109th ANNUAL MEETING

of the

West Virginia State Medical Association

THE GREENBRIER, WHITE SULPHUR SPRINGS

August 18-21, 1976

WEDNESDAY MORNING

August 18

(Eastern Daylight Time)

9:00-5:00—Registration, Main Floor Lobby.

9:30—Pre-Convention Meeting of the Council. William E. Gilmore, M.D., presiding (Lee Room, Virginia Wing).

WEDNESDAY AFTERNOON

2:30—First Session of the House of Delegates. Jack Leckie, M.D., presiding (Chesapeake Hall).

Invocation—Carl B. Hall, M.D., President, American Academy of Family Physicians.

Address: Richard E. Palmer, M.D., President, American Medical Association.

Presentation of AMA-ERF Checks to the West Virginia University and Marshall University Schools of Medicine.

Business Meeting.

WEDNESDAY EVENING

6:30-7:30—President's Reception for Honor Guests (Old White Patio).

THURSDAY MORNING

August 19

8:30-5:00—Registration, Main Floor Lobby.

Opening Exercises

(Theater)

9:00—Call to Order—Jack Leckie, M.D., President, West Virginia State Medical Association.

Invocation—Joe N. Jarrett, M.D.

Address of Welcome—Jack Leckie, M.D.

Introduction of Robert D. Hess, M.D., 1976 Program Committee Chairman, and other members of his Committee.

"The Thomas L. Harris Address"

Tenley E. Albright, M.D., Boston, Massachusetts, General Surgeon and 1956 Olympic Gold Medal Winner in Women's Figure Skating.

First General Session

"Symposium on Pulmonary Diseases"

9:45-12:30

Moderator: N. LeRoy Lapp, M.D.

9:45—Richard B. Hornick, M.D., Professor and Director, Division of Infectious Diseases, University of Maryland School of Medicine, Baltimore. Subject: "Viral Infections of the Lung."

Paul M. Stevens, M.D., Professor of Medicine and Chief, Pulmonary Section, Baylor College of Medicine, Houston, Texas. Subject: "Recent Advances in the Therapy of Chronic Reversible Airway Obstruction."

Eugene J. Linberg, M.D., Thoracic, Vascular and Abdominal Surgeon, Naples, Florida. Subject: "Surgical Physiology of Pulmonary Disease."

12:30—Recess for Lunch.

12:30—Luncheon Honoring Past Presidents of the West Virginia State Medical Association. William E. Gilmore, M.D., presiding (Tyler Room).

THURSDAY AFTERNOON

2:00—Resolutions Committee—Richard E. Flood, M.D., presiding (West Virginia Room).

2:00—Aetna Life and Casualty Presentation by D. John Pecorino, Manager, Aetna's Commercial Lines Department - Field Oper-

ations, Hartford, Connecticut. Subject: "The Growing Malpractice Scene." Lyle D. Vincent, M.D., presiding (Theater).

THURSDAY EVENING

6:00—Cocktail Party. West Virginia Alumni Association. Clark K. Sleeth, M.D., in charge (West Virginia Room).

FRIDAY MORNING

August 20

Breakfast Meetings

7:45—West Virginia Academy of Ophthalmology and Otolaryngology. Richard D. Richmond, M.D., presiding (Washington Room, Virginia Wing).

7:45—Section on Internal Medicine. Harold Selinger, M.D., presiding (Lee Room, Virginia Wing).

Questions and Answers Dealing with Pulmonary Diseases: Richard B. Hornick, M.D., Baltimore, Maryland; and Paul M. Stevens, M. D., Houston, Texas.

7:45—West Virginia Obstetrical and Gynecological Society and Section on Urology. Robert P. Pulliam, M.D.; and A. Thomas McCoy, M.D., presiding (Tyler Room).

Guest Speaker: Thomas H. Joyce III, M.D., Cincinnati, Ohio. Subject: "The Numb Bottom: A Historical Approach."

7:30—West Virginia State Society of Anesthesiologists. Richard B. Knapp, M.D., presiding (Pierce Room).

Guest Speaker: Carl Wasmuth, M.D., Director of Anesthesiology, Cleveland Clinic, Cleveland, Ohio. Subject: "Medical Malpractice and Anesthesiology."

7:45—Section on Orthopedic Surgery. Tony C. Majestro, M.D., presiding (Jackson Room).

Guest Speaker: Robert N. Clark, M.D., Chairman and Professor of Orthopedic Surgery, West Virginia University School of Medicine, Morgantown. Subject: "Pathogenesis and Treatment of Perthes Disease."

7:45—Section on Surgery. Walter E. Klingensmith, M.D., presiding (Buchanan Room).

Guest Speaker: Eugene J. Linberg, M.D., Naples, Florida.

7:45—West Virginia Section, American College of Nuclear Medicine. Steven A. Artz, M.D., presiding (Directors' Room).

Guest Speaker: Gerald A. Bruno, Ph.D., Director, Diagnostics Research and Development Department, E. R. Squibb & Sons, New Brunswick, New Jersey. Subject: "The Current State of the Art in Radio-Pharmaceuticals."

7:45—Section on Dermatology. William D. McLean, M.D., presiding (Eisenhower Hall, Parlor C).

8:30-5:00—Registration, Main Floor Lobby.

Second General Session

(Theater)

Moderator: Herbert H. Pomerance, M.D.

9:30—William A. Neal, M.D., Assistant Professor of Pediatrics, West Virginia University School of Medicine, Morgantown. Subject: "Regionalization of Perinatal Care in West Virginia."

10:15—Thomas H. Joyce III, M.D., Associate Professor of Anaesthesia and Obstetrics and Gynecology, University of Cincinnati Medical Center, Cincinnati, Ohio. Subject: "A Broad Review of Obstetrical Anaesthesia."

11:00—Coffee Break.

11:15—Philip R. Nader, M.D., Associate Professor of Pediatrics and Psychiatry and Director, School Health Programs, University of Texas Medical Branch, Galveston. Subject: "Children, Schools and Doctors."

12:00—Recess for Lunch.

12:00—Publication Committee. George F. Evans, M.D., presiding (Buchanan Room).

12:15—Cancer Committee. James P. Carey, M.D., presiding (Main Dining Room).

FRIDAY AFTERNOON

2:00—West Virginia Chapter, American Academy of Pediatrics. Herbert H. Pomerance, M.D., presiding (Fillmore Room).

Guest Speaker: Philip R. Nader, M.D., Galveston, Texas. Subject: "Learning Disabled—Mislabeled."

2:00—West Virginia Chapter, American College of Emergency Physicians. Jerry A. Maliska, M.D., presiding (West Virginia Room).

Guest Speakers:

Harris B. Graves, M.D., President, American College of Emergency Physicians, Lansing, Michigan. Subject: "American College of Emergency Physicians: Past, Present and Future."

Frederick M. Cooley, M.D., Medical Director, West Virginia Division of Emergency Services, Charleston. Subject: "West Virginia Emergency Medical Services."

Richard W. Moriarty, M.D., Pittsburgh. Subject: "Poisonings."

4:00—West Virginia Chapter, American Society of Internal Medicine. John F. Otto, Jr., M.D., presiding (Jackson Room).

4:00—West Virginia District Branch, American Psychiatric Association. Florence K. Hoback, M.D., presiding (Directors' Room).

Guest Speaker: Frank J. Ayd, Jr., M.D., Chief of Psychiatry, Franklin Square Hospital, Baltimore, Maryland. Subject: "The Current Status of Psycho-Pharmaco Therapy."

5:00—Committee on Nominations. Worthy W. McKinney, M.D., presiding (Lee Room, Virginia Wing).

FRIDAY EVENING

6:00—Cocktail Party. The University of Virginia Medical School Foundation. McLemore Birdsong, M.D.; James C. Respess, M.D.; J. Brookins Taylor, M.D.; and William C Morgan, M.D., in charge (Chesapeake Bay).

6:30—Cocktail Party. West Virginia Chapter, Medical College of Virginia Alumni Association. Thomas J. Janicki, M.D., in charge (Old White Patio).

8:00—"Gala Affair," Banquet and Dance (music by "Gingerbread," Pittsburgh), sponsored by the Woman's Auxiliary. Hostess, Ohio County, Mrs. Robert J. Reed III, Chairman. Intermission, Dr. and Mrs. M. V. Kalaycioglu (Colonial Hall).

SATURDAY MORNING

August 21

7:45—W. Va. Medical Institute, Inc., Board of Trustees. Harry S. Weeks, Jr., M.D., presiding (Pierce Room).

7:45—West Virginia Radiological Society. James T. Smith, M.D., presiding (Buchanan Room).

Guest Speaker: John A. Goree, M.D., Professor of Radiology and Chief, Section of Neurologic Radiology, Duke University Medical Center, Durham, North Carolina. Subject: "Some Aspects of Emergency Radiologic Examination of the Head and Neck."

9:00-2:00—Registration, Main Floor Lobby.

Third General Session
(Theater)

Moderator: Richard E. Flood, M.D.

9:00—Richard W. Moriarty, M.D., Assistant Professor, Department of Pediatrics, University of Pittsburgh and Director, National Poison Center Network, Children's Hospital of Pittsburgh. Subject: "Poisonings—Some New Concepts and Some Old Ones Revisited."

9:45—Thomas L. Stern, M.D., Director, Division of Education, American Academy of Family Physicians, Kansas City, Missouri. Subject: "Motivation and Preparation for Becoming a Teacher."

10:30—Coffee Break.

10:45—Richard E. Flood, M.D., Weirton, Physician Member of the National Joint Practice Commission; and
Elizabeth A. O'Connell, R.N., Professor of Nursing, West Virginia University, Morgantown. Subject: "The Joint Practice Commission and Quality Care."

11:40—George R. Callender, Jr., M.D., Charleston, Medical Director of the West Virginia Medical Institute, Inc. Subject: "The Physician and Professional Standards Review."

SATURDAY AFTERNOON

12:30—West Virginia Association of Pathologists. John P. Shiels, M.D., presiding (Pierce Room).

2:30—Second and Final Session of the House of Delegates. Jack Leckie, M.D., presiding (Chesapeake Hall).

Invocation—Joseph T. Skaggs, M.D.

Presidential Address: Jack Leckie, M.D., President, West Virginia State Medical Association.

Presentation of New Officers of Woman's Auxiliary to the West Virginia State Medical Association.

Presentation of Honor Guests.

Business Meeting.

Election of Officers.

Installation of John J. Mahood, M.D., of Bluefield, as President of the West Virginia State Medical Association.

SATURDAY EVENING

6:30-7:30—Cocktail Party and Reception Honoring Officers of the West Virginia State Medical Association (Colonial Hall Terrace).

CONVENTION SPEAKERS

Richard B. Hornick, M. D.

Baltimore, Md.

Professor and Director, Division of Infectious Diseases, University of Maryland School of Medicine

Paul M. Stevens, M. D.

Houston, Texas

Professor of Medicine and Chief, Pulmonary Section, Baylor College of Medicine

Eugene J. Linberg, M. D.

Naples, Fla.

Thoracic, Vascular and Abdominal Surgeon

William A. Neal, M. D.
Morgantown, W. Va.
Assistant Professor of Pediatrics, West Virginia University School of Medicine

Thomas H. Joyce III, M. D.

Cincinnati, Ohio

Associate Professor of Anaesthesia and Obstetrics and Gynecology, University of Cincinnati Medical Center

Philip R. Nader, M. D.

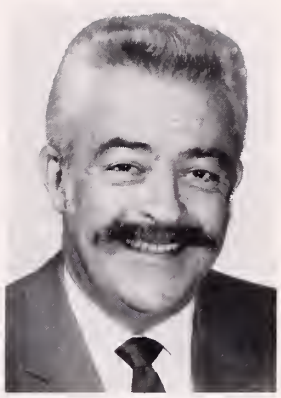
Galveston, Texas

Associate Professor of Pediatrics and Psychiatry and Director, School Health Programs, University of Texas Medical Branch

Richard W. Moriarty, M. D.

Pittsburgh, Pa.

Assistant Professor, Department of Pediatrics, University of Pittsburgh and Director, National Poison Center Network, Children's Hospital of Pittsburgh



Thomas L. Stern, M. D.

Kansas City, Mo.

Director, Division of Education, American Academy of Family Physicians

Richard E. Flood, M. D.

Weirton, W. Va.

Physician Member of the National Joint Practice Commission

Elizabeth A. O'Connell, R. N.

Morgantown, W. Va.

Professor of Nursing, West Virginia University

George R. Callender, Jr., M. D.

Charleston, W. Va.

Medical Director, West Virginia Medical Institute, Inc.

A WORD OF THANKS

The 1976 Program Committee, and the officers and members of the West Virginia State Medical Association, wish to acknowledge with sincere thanks grants received from the following Firms to help support the Scientific Program for this year's 109th Annual Meeting:

THE AETNA CASUALTY & SURETY COMPANY
Hartford, Connecticut

CIBA PHARMACEUTICAL COMPANY
Summit, New Jersey

GEIGY PHARMACEUTICALS
Ardsley, New York

HOSPITAL & PHYSICIANS SUPPLY COMPANY
Charleston, West Virginia

ELI LILLY AND COMPANY
Indianapolis, Indiana

McDONOUGH-CAPERTON-SHEPHERD-GOLDSMITH
Charleston, West Virginia

MEAD JOHNSON AND COMPANY
Evansville, Indiana

MERCK SHARPE & DOHME
King of Prussia, Pennsylvania

MERRELL-NATIONAL LABORATORIES
Cincinnati, Ohio

PARKE, DAVIS & COMPANY
Detroit, Michigan

WILLIAM P. POYTHRESS AND COMPANY, INC.
Richmond, Virginia

SCHERING CORPORATION
Bloomfield, New Jersey

SMITH KLINE & FRENCH LABORATORIES
Philadelphia, Pennsylvania

A. H. ROBINS COMPANY
Richmond, Virginia

ROCHE LABORATORIES
Nutley, New Jersey

THE UPJOHN COMPANY
Kalamazoo, Michigan

WYETH LABORATORIES
Philadelphia, Pennsylvania

(The firms listed above are those which had allocated funds to the Scientific Program as this issue of *The Journal* went to press. Additional contributors will be listed in the Official Program to be distributed at The Greenbrier.)

1976 PROGRAM COMMITTEE

Robert D. Hess
Bridgeport
Chairman

Carl B. Hall
Charleston

Lyle D. Vincent
Parkersburg

Robert P. Pulliam
Beckley

John J. Mahood
Bluefield

Alvin L. Watne
Morgantown

DELEGATES AND ALTERNATES

BOONE (2)—Delegates, A. E. Glover and Harold H. Howell, Madison. Alternates, W. V. Wilkerson and George H. Cook, Whitesville.

BROOKE (2)—Delegates, James E. Wise, Follansbee; and W. T. Booher, Sr., Wellsburg. Alternate, Ralph McGraw, Follansbee.

CABELL (10)—Delegates, Edwin J. Humphrey, III, James A. Heckman, James P. Carey, Robert Wylie Lowe, Harold N. Kagan, Sirous Arya, Joseph Edwin Ricketts, W. L. Neal, Gilbert A. Ratcliff, Sr., and William J. Echols, Huntington. Alternates, Thomas G. Folsom, Barboursville; C. Stafford Clay, Florence K. Hoback, Roy A. Edwards, Jr., and M. Bruce Martin, Huntington; W. W. Mills, Kenova; and John J. Brandabur, Joseph B. Touma, Charles Abraham and N. Nazem Abraham, Huntington.

CENTRAL WEST VIRGINIA (4)—Delegates, Clemente Diaz, Richwood; Yong Don Joo, Summersville; Louis W. Groves, Jr., Richwood; and Joseph B. Reed, Buckhannon. Alternates, R. L. Chamberlain, Buckhannon; Roger Paul Bennett, Upperglade; C. R. Davisson, Weston; and I. F. Hartman, II, Buckhannon.

EASTERN PANHANDLE (5)—Delegates, Norman Samuels, Leo H. T. Bernstein, C. Vincent Townsend and L. Walter Fix, Martinsburg.

FAYETTE (3)—Delegates, A. R. Bautista, Montgomery; W. P. Bittinger, Oak Hill; Chuan H. Lee, Montgomery; and Joe N. Jarrett, Oak Hill. Alternates, Carl R. Adkins, Fayetteville; and Thomas C. Sims, Smithers.

GREENBRIER VALLEY (4)—Delegates, Romeo R. Ednacot, Ronceverte; William D. McClung, Lewisburg; Harvey A. Martin, White Sulphur Springs; and Houston B. Moore, Lewisburg. Alternates, Harold P. Dinsmore, Ronceverte; Thomas O. Dotson, White Sulphur Springs; and Joseph E. Shaver and Jose B. Caringal, Ronceverte.

HANCOCK (4)—Delegates, George S. Kosar, Richard E. Flood, Ray S. Greco and Carlos L. Vasquez, Weirton. Alternate, Thomas J. Beynon, Weirton.

HARRISON (5)—Delegates, Mehmet V. Kalaycioglu, Shinnston; Julian D. Gasataya, Lumberport; Frederick A. Spencer, Jr., Salem; and L. Dale Simmons and Joseph Gilman, Clarksburg. Alternates, Cordell de la Pena, Charles S. Harrison and Paul E. Gordon, Clarksburg; Victorino D. Chin, Bridgeport; and Catalino B. Mendoza, Jr., Clarksburg.

KANAWHA (18)—Delegates, George R. Callender, Jr., Charleston; Marshall J. Carper, South Charleston; Jean P. Cavender and W. Alva Deardorff, Charleston; Ralph J. Hollaway, South Charleston; George W. Hogshead, Nitro; J. L. Mangus, John B. Markey, Carl J. Roncaglione, Joseph T. Skaggs, Jacques Charbonniez, Sherman E. Hatfield, Thomas J. Janicki, Seigle W. Parks and G. A. Shawkey, Charleston; Richard C. Rashid, South Charleston; R. S. Birckhead, Gauley Bridge; and Harold Selinger, Charleston. Alternates, Adla Adi, Carrel M. Caudill, Jose A. Celis, Charleston; Donald E. Cunningham, St. Albans; Donald E. Farmer, John A. B. Holt, Miroslav Kovacevich, James W. Lane, Ralph H. Nestmann, William C. Revercomb and John F. Zeedick, Charleston.

LOGAN (4)—Delegates, Thomas P. Long, Man; Ray M. Kessel, Logan; Jorge J. San Pedro, Man; and Leandro P. Galang, Logan. Alternate, Abelardo A. Pelaez, Logan.

MARION (4)— Delegate, Joseph D. Romino, Fairmont. Alternates, John C. Turner and William T. Lawson, Fairmont.

MARSHALL (3)—Delegates, Kenneth J. Allen, Glen Dale; David L. Ealy, Moundsville; and E. Y. Baysal, Glen Dale. Alternate, William Paul Bradford, Moundsville.

MASON (2)—Delegates, Aarom Boonsue and Ismael O. Jamora, Pt. Pleasant. Alternates, Mark Cheng and Young Choi, Pt. Pleasant.

McDOWELL (3)—Delegates, Arthur Allen Carr, Charles F. McCord and Freeman L. Johnston, Welch. Alternates, Ray E. Burger, John S. Cook and Louis A. Vega, Welch.

MERCER (6)—Delegates, Upshur Higginbotham, Bluefield; Frank J. Holroyd, Princeton; Sam Milchin, Bluefield, Virginia; L. J. Pace, Princeton; and T. Keith Edwards and David F. Bell, Jr., Bluefield. Alternates, Edward M. Spencer, J. E. Blaydes, Jr., and Richard O. Rogers, Jr., Bluefield; Gordon Prescott, Princeton; P. R. Higginbotham, Bluefield; and Jess P. Champion, Princeton.

MINGO (3)—Delegates, Edward B. Headley, Arthur E. Levy and Robert J. Tchou, Williamson. Alternates, Charles H. Bruce, Russell A. Salton and C. R. Deang, Williamson.

MONONGALIA (11)—Delegates, John L. Fullmer, Stanley J. Kandzari, W. Gene Klingberg, Roy James Stevens, David Z. Morgan, Roger E. King, Joseph J. Renn, III, Ludwig Gutmann, Barbara Jones, Nathaniel F. Rodman and Ralph W. Ryan, Morgantown. Alternates, George A. Curry, Lawrence S. Miller, Philip M. Sprinkle, Robert L. Smith, K. Douglas Bowers, Jr., R. F. Krause, Richard S. Kerr, Alvin L. Watne, Margaret I. Stemple, Herbert E. Warden and William A. Neal, Morgantown.

OHIO (9)—Delegates, Robert R. Weiler, Robert J. Reed, III, Stephen D. Ward, F. Jay Keefer, William E. McNamara, Francis J. Gaydosh, A. Athari, Sam Vukelich and Thomas L. Thomas, Wheeling.

PARKERSBURG ACADEMY (7)—Delegates, S. William Goff, Joseph C. Woofter, Francis C. Huber, Jr., William E. Gilmore, Lyle D. Vincent and Harry Lee Shannon, Parkersburg.

POTOMAC VALLEY (3)—Delegates, Dewey F. Bensenhaver, Petersburg; Rano S. Bofill, Ft. Ashby; and M. F. Townsend, Petersburg. Alternates, Estevan Friera, Romney; Larry C. Rogers, Petersburg; and James C. Bosely, Piedmont.

PRESTON (2)—Delegates, Donald P. Brown, Kingwood; and Jerome C. Arnett, Rowlesburg. Alternates, Del Roy R. Davis, Kingwood; and William H. Harriman, Jr., Terra Alta.

RALEIGH (6)—Delegates, Kwan Ho Lee, Prospero B. Gogo, Walter E. Klingensmith, Stephen T. J. Lee, Joseph A. Maiolo, Richard G. Starr and Worthy W. McKinney, Beckley. Alternates, John M. Daniel, William D. McLean, Eugene Warvariv, W. H. Rardin, Nicholas D. Zambos, and Grover C. Hedrick, Jr., Beckley.

SUMMERS (2)—Delegates, Buford W. McNeer and Mousa I. Debabnah, Hinton. Alternates, E. L. Jimenez and Jack D. Woodrum, Hinton.

TYGART'S VALLEY (5)—Delegates, T. H. Chang, Philippi; H. L. Jellinek, Elkins; A. Kyle Bush and Hu C. Myers, Philippi; and Wallace B. Murphy, Grafton. Alternates, L. H. Nefflen and Robert R. Rector, Elkins; Samuel M. Santibanez, Grafton; J. Marlin Nissley, Philippi; and P. C. Tampoya, Grafton.

WETZEL (2)—Delegates, Lemoyne Coffield and Terry T. Tallman, New Martinsville. Alternates, Terry Coffield, New Martinsville; and Allen M. Dyer, Jr., Pine Grove.

WYOMING (2)—Delegates, Frank J. Zsoldos and Ross E. Newman, Mullens. Alternate, George F. Fordham, Mullens.

Reception Committee

JOSEPH A. SMITH, *Chairman*

Jack Leckie
C. A. Hoffman
Frank J. Holroyd
Richard E. Flood
Robert D. Hess

R. U. Drinkard
Joseph T. Skaggs
Kennth G. MacDonald
John J. Mahood
Henrietta L. Marquis

Herbert H. Pomerance
Florence K. Hoback
I. A. Wiles
J. L. Mangus
L. Dale Simmons

Vernon E. Duckwall
John J. Brandabur
A. Thomas McCoy
David F. Bell, Jr.
Walter E. Klingensmith

George R. Callender, Jr.
Harry S. Weeks, Jr.
M. Bruce Martin
Albert C. Esposito
Robert R. Weiler

Harold Selinger
John F. Otto, Jr.
Richard G. Starr
Charles E. Andrews
Winfield C. John

Lyle D. Vincent
Del Roy R. Davis
John T. Chambers
Robert P. Pulliam
Gary G. Gilbert

George A. Curry
Carl B. Hall
Ray M. Kessel
Donald P. Brown
Thomas P. Long

William E. Gilmore
Harold N. Kagan
Charles E. Turner
Worthy W. McKinney
W. Alva Deardorff

Alvin L. Watne
Buford C. McNeer
L. J. Pace
Arthur E. Levy
Robert W. Lowe

Official Program

WOMAN'S AUXILIARY

to the

West Virginia State Medical Association

52nd Annual Meeting

THE GREENBRIER

White Sulphur Springs

August 18-21, 1976

WEDNESDAY AFTERNOON

August 18

2:30—First Session of the House of Delegates, State Medical Association (Chesapeake Hall).

Address by Dr. Richard E. Palmer, President, American Medical Association.

4:00—Pre-Convention Board Meeting, Mrs. Robert R. Weiler, President, presiding (Fillmore-Van Buren Rooms).

WEDNESDAY EVENING

6:30-7:30—President's Reception for Honor Guests (Old White Patio).

THURSDAY MORNING

August 19

9:00—Formal Opening of the 109th Annual Meeting of the West Virginia State Medical Association (Greenbrier theater).

"The Thomas L. Harris Address"

Tenley E. Albright, M.D., Boston, Massachusetts, General Surgeon and 1956 Olympic Gold Medal Winner in Women's Figure Skating.

(Auxiliary Members are Invited to Attend).

9:45—Formal Opening of the Convention, Mrs. Robert R. Weiler, President, presiding (Fillmore-Van Buren Rooms).

Invocation—Mrs. M. Bruce Martin.

Pledge of Loyalty—Mrs. M. Bruce Martin.

Introduction of Honor Guests.

Presentation of Jack Leckie, M.D., President, West Virginia State Medical Association.

Introduction of Convention Co-Chairmen—Mrs. Howard G. Weiler and Mrs. Robert T. Bandi.

Roll Call of Delegates—Mrs. Robert J. Reed III.

Convention Rules of Order—Mrs. M. Bruce Martin.

Treasurer's Report—Mrs. Louis W. Groves.

In Memoriam—Mrs. Harry E. Coffman.

Credentials and Registration—Mrs. Miroslav Kovacevich.

Keynote Address—Mrs. Norman H. Gardner, President, Woman's Auxiliary to the American Medical Association.

Recommendations from Pre-Convention Board Meeting—Mrs. Robert R. Weiler.

New Business and Announcements.

Report of the Nominating Committee, First Reading—Mrs. William T. Lawson.

Election of 1977 Nominating Committee.

Reports of Officers and Standing Committee Chairmen (These reports will not be read, but are published in the Annual Reports Book.)

Presentation of Regional Directors:

Eastern Region—Mrs. David Z. Morgan.

Northern Region—Mrs. Harry S. Weeks, Jr.

Western Region—Mrs. Gary G. Gilbert.

Southern Region—Mrs. T. Keith Edwards.

Central Region—Mrs. Donald G. Hassig.

Recess.

THURSDAY AFTERNOON

2:30—Bridge (Trellis Lobby). Hostess, Harrison County, Mrs. Robert D. Hess, Chairman.

FRIDAY MORNING

August 20

8:00—Past President's Breakfast, Mrs. William T. Lawson, Immediate Past President, presiding (Virginia Room).

9:45—Second General Session—Mrs. Robert R. Weiler, President, presiding (Fillmore-Van Buren Rooms).

Introduction of Honor Guests.

Roll Call of Delegates—Mrs. Robert J. Reed III.

Report of Reading Committee.

Reports of Convention Committees:

Finance—Mrs. J. Dennis Kugel.

Credentials and Registration—Mrs. Miroslav Kovacevich.

Press and Publicity—Mrs. John E. McKenzie.

Presentation of AMA-ERF Awards.
Dr. John E. Jones, Dean of West Virginia University School of Medicine; Mrs. Paul Francke, Jr., State Chairman.

Address—Mrs. Opal Dees, President, Woman's Auxiliary to the Southern Medical Association.

Unfinished Business.

Report of 1976 Nominating Committee, Second Reading—Mrs. William T. Lawson.

Election of Officers.

Installation of Officers—Mrs. Norman H. Gardner, President, Woman's Auxiliary to the American Medical Association.

Presentation of President's Pin and Gavel—Mrs. Robert R. Weiler.

Presentation of Past President's Pin—Mrs. William T. Lawson.

Inaugural Address—Mrs. J. L. Mangus.

Announcements.

Adjournment.

FRIDAY AFTERNOON

2:00—Golf Tournament—Hostess, Marion County, Mrs. Joseph T. Mallamo, Chairman.

Tennis Tournament—Hostess, Raleigh County, Mrs. C. Richard Daniel, Chairman.

FRIDAY EVENING

8:00—Banquet and Dance, "Gala Affair" (music by "Gingerbread," Pittsburgh). Hostess, Ohio County, Mrs. Robert J. Reed III, Chairman. Intermission, Dr. and Mrs. M. V. Kalaycioglu (Colonial Hall).

SATURDAY MORNING

August 21

10:00—Post-Convention Conference and Board Meetings—Mrs. J. L. Mangus, President, presiding (Fillmore-Van Buren Rooms).

SATURDAY AFTERNOON

2:30—Second and Final Session of the House of Delegates of the State Medical Association (Chesapeake Hall).

Presidential Address—Jack Leckie, M.D.

Installation of John J. Mahood, M.D., as 1976-77 President of the West Virginia State Medical Association.

(Auxiliary Members are Invited to Attend).

SATURDAY EVENING

6:30-7:30—Cocktail Party and Reception Honoring the Officers of the West Virginia State Medical Association (Colonial Hall Terrace).

SCIENTIFIC EXHIBITS

AMERICAN DIABETES ASSOCIATION
West Virginia Affiliate

"DIABETES."

AMERICAN HEART ASSOCIATION
West Virginia Affiliate

"HYPERTENSION." A listing and display of the latest educational materials for physicians and patients from the AHA on the detection, treatment and management of hypertension.

Charles E. Sikorski, Executive Director; and Jeffrey Sikorski, Volunteer.

BLUE SHIELD OF SOUTHERN WEST VIRGINIA, INC.

"HEALTH EDUCATION AND PUBLICATIONS." Informational materials published by national associations.

C. Judson Pearson, President; James R. Harlan II, Director, Provider Relations Department; L. G. Bowling, Director, Utilization Review; and Rand Schoolfield, Director of Communications.

DEPARTMENT OF ANESTHESIOLOGY
West Virginia University
School of Medicine

"THE BENZODIAZEPINE DERIVATIVES AND TOTAL AMNESIA: A NEW APPROACH TO PREMEDICATION." In series of investigations of over 1,000 patients, lorazepam, a benzodiazepine derivative, was administered as a premedicant. Cardiac output, blood gases, tidal, and minute volume studies all indicated cardiopulmonary safety in the dosage of lorazepam used clinically. Within one hour of an intramuscular injection of 3 to 5 mg. of lorazepam, patients became amnesic, with this loss of recall persisting for 10 to 14 hours postinjection. Thus, patients did not recall leaving the room, seeing the operating theater, or being in the recovery room. While under the influence of lorazepam, patients are awake, appear sedated, but follow directions and respond to command. Double-blind studies testing memory and response are planned.

Richard B. Knapp, M. D., Professor and Chairman; and Edwyn L. Boyd, Third-Year Medical Student, WVU.

DEPARTMENT OF PEDIATRICS
West Virginia University
School of Medicine

"CRITICAL CARE TRANSPORT OF NEONATES." Presents pictures of an actual neonatal transport in progress. Photographed by the referring physician. Lists "Indications for Possible Transfer," and "How to Activate WVU Transport Team."

William A. Neal, M. D., Director, Newborn Intensive Care; William G. Klingberg, M. D., Chairman; and Barbara Jones, M. D., Professor of Pediatrics.

DIVISION OF UROLOGY
West Virginia University
Medical Center

"ELECTRICAL STIMULATION OF THE URINARY BLADDER." This exhibit is to demonstrate the surgical technique of electrical stimulation of the urinary bladder by using the Mentor Bladder Pacemaker. Brochures will be available.

Stanley J. Kandzari, M. D., Associate Professor.

HAND SERVICE, DIVISION OF ORTHOPEDIC SURGERY
West Virginia University and Monongalia General Hospital (Lawrance S. Miller, M. D.)

"RECONSTRUCTIVE SURGERY IN THE SEVERELY DEFORMED RHEUMATOID HAND AND WRIST." Justified emphasis has been placed on the early treatment of rheumatoid arthritis and prevention of deformities, but unfortunately many severe crippling deformities of hands as well as other joints are found throughout the population of West Virginia and other states. Much can be done to alleviate the suffering and deformity as well as to improve the function of the severely crippled hands. This exhibit will demonstrate some of the useful surgical procedures in hand rehabilitation, and will include synovectomy, wrist and hand joint replacement, and tendon reconstruction.

Lawrance S. Miller, M. D.

THE HUNTINGTON POISON CENTER

"THE HUNTINGTON POISON CENTER." The Huntington Poison Center, a satellite center of the Pittsburgh Poison Center Network, has three emphases. The first area involves providing information about poisons to medical personnel and the public. It will illustrate its sources of information, the importance of the telecopier, and the back-up resources of the Pittsburgh Poison Center. The second area involves the treatment of poisonings. It will demonstrate the basic management of poisonings. The third emphasis involves poison prevention. It will demonstrate some of its educational activities, which include "Mr. Yuk," speakers bureaus for adults and children, etc.

W. F. Daniels, M. D., Medical Director; and Jenny Daniels, Chairman of The Huntington Poison Center Committee, The Junior League of Huntington.

THE SAMUEL LIVINGSTON EPILEPSY DIAGNOSTIC & TREATMENT CENTER

Baltimore, Maryland

"COMPREHENSIVE MANAGEMENT OF EPILEPSY." The data presented in this exhibit are based on direct clinical observations, EEG examinations and intimate follow-up studies of approximately 28,000 epileptic patients over the past 40 years. The following aspects of epilepsy are displayed: classification of epileptic seizures, general principles of drug therapy, specific drug therapy for epilepsy, dietary treatment of epilepsy, surgical treatment of epilepsy, the EMI scan, use of the EEG in epilepsy, cutaneous reactions of antiepileptic drugs, diphenylhydantoin gingival hyperplasia, anticonvulsant drug blood levels, treatment should be initiated with one drug, epilepsy and sports, use of amphetamines in epilepsy, Do anticonvulsant drugs cause rickets?; and, Are anticonvulsant drugs teratogenic?

Samuel Livingston, M. D., Director; Lydia L. Pauli, M. D., Associate Director, and Irving Pruce, B. S., Director of Research.

GEORGE L. LUCAS, M. D.

Madison, Wisconsin

"EXAMINATION OF THE ACUTELY INJURED HAND." This exhibit was prepared by Doctor Lucas for the American Association of Hand Surgery and is designed as a teaching exhibit for family practitioners, interns, residents, general surgeons, etc. It depicts the stages of examination and evaluation of the acutely injured hand by the use of enlarged color photographs and color line drawings.

THE MYERS CLINIC—BROADDUS HOSPITAL

"REGIONAL ILITIS." This exhibit presents an overview of regional ilitis, with emphasis on diagnosis, etiology and treatment, and two case presentations, including surgical specimens, photomicrographs and x-rays.

F. R. Franyutti, M. D., Director of Pathology, and J. Richard Crawford, R. B. P., Director of Photography.

NATIONWIDE INSURANCE—MEDICARE

"MEDICARE INFORMATION." Nationwide invites your inspection of a new claim form designed to increase our claims processing speed and accuracy. We encourage you to order and begin using these as soon as possible. Complimentary copies of Currier & Ives reprints will again be available.

Don F. Harper, District Medicare Manager; Randy Swecker, District Medicare Manager; and James A. Cuppy, Field Service Manager.

WEST VIRGINIA COMPREHENSIVE HEALTH PLANNING AGENCY

"STATUS OF HEALTH PLANNING AND DEVELOPMENT IN WEST VIRGINIA." Information will be available about health planning and development activities in West Virginia. A representative will be present to answer questions and receive suggestions. A major topic will be the implementation of the National Health Planning and Resource Development Act of 1974 (Public Law 93-641). The West Virginia Health Systems Agency and the West Virginia Health Planning and Development Agency will be formed under this new Federal law.

Harry A. Stansbury, Jr., Ph. D., Director.

WEST VIRGINIA DEPARTMENT OF MENTAL HEALTH

"SERVICES." Mental health laws and program brochures will be available. The backdrop of the exhibit will be a map of West Virginia showing the various mental health-mental retardation facilities.

Blaine P. Dowler, Coordinator, Division of Mental Health Education; and Wayne F. Dawson, Education Consultant.

WEST VIRGINIA LUNG ASSOCIATION and WEST VIRGINIA THORACIC SOCIETY

"LUNG DISEASE LEARNING RESOURCES CENTER." The Learning Resources Center will offer an opportunity for physicians to review self-teaching materials in lung disease problems. Utilizing 10 rear-screen, synchronized sound/slide projectors, the programs provided will supplement the general session, "Symposium on Pulmonary Disease," to be held on Thursday, August 19. More than 12 different programs, consisting of 35mm. slides and tape cassettes, will be offered. The "Learning Resources Center Concept" has proved highly successful at national meetings of the American Thoracic Society and the American College of Chest Physicians.

Carl C. Booberg, Executive Director; Morton Braunstein, Director, Program Development; and Ms. Kassy Kennedy, Director, Public Information.

WEST VIRGINIA MEDICAL INSTITUTE, INC.

"WEST VIRGINIA MEDICAL INSTITUTE." This exhibit will provide information concerning the Professional Standards Review Organization, including the delegation of review activities to hospitals and the monitoring of this review by the Institute. Educational materials will also be available for physician advisors. Personnel will be available to discuss or explain present and future Institute activities.

Betty C. Kirkwood, Executive Director; Harry S. Weeks, Jr., M. D., President, and George R. Callender, Jr., M. D., Medical Director.

WEST VIRGINIA STATE DEPARTMENT OF HEALTH

"HEALTH EFFORTS IN '76." The West Virginia State Department of Health will present a combined exhibit which will focus on health efforts in the following areas of interest: sexually transmitted diseases (VD), vaccination assistance (specifically concerning Swine Influenza), health statistics, and

Maternal and Child Health's Early Childhood Development Project.

Ronald G. Bryant, Director of Venereal Disease Control.

4-H YOUTH DEVELOPMENT DIVISION
West Virginia University

"WEST VIRGINIA 4-H HEALTH PROGRAMS: TOTAL FITNESS." The 4-H has been a dynamic force in the lives of many West Virginia youths for more than half a century. The health programs of the 4-H do make an impact on health attitudes and skills, especially when the 4-H professional and volunteers in each county have the support of the health professional—YOU. The two-year "Total Fitness" program which West Virginia youths are involved with now incorporates physical fitness, nutrition and personal care. Do stop and explore this with us.

C. Sue Cecil, Extension Specialist-4-H, WVU.

Manuscript Information

Manuscripts to be presented for publication in *The West Virginia Medical Journal* should be typewritten, triple-spaced, on one side only of firm (no onion skin or flimsy), standard letter sized (8 1/2 by 11 in.) white paper. Wide margins (at least 1 1/4 in. on left) should be left free of typing. On the first or title page should be shown the title of the article, the name (or names) of the author, and his degrees. Pages should be numbered consecutively, the page number being shown in the right upper corner along with the surname of the author.

Authors are requested to submit a carbon copy with the original.

Illustrations should be numbered and their approximate locations shown in the text. Each should be identified by placing on its back the author's name, its number and an indication of its "top." Drawings and charts intended for reproduction should be done in black (India) ink on pure white. Photographs should be on glossy paper and minimum of about 5 by 7 in. in size. A legend should be provided for each illustration and, preferably, attached to it.

All scientific material appearing in *The Journal* is reviewed by the Editorial Board. Manuscripts should be mailed to The Editor, West Virginia Medical Journal, Box 1031, Charleston, W. Va. 25324.

ANNUAL REPORTS

Insurance Committee

The West Virginia State Medical Association Insurance Program, under the capable administration of McDonough, Caperton, Shepherd and Goldsmith, continues to be strongly supported by our State physicians. The various policies offered under the program are under constant review and are being continually modified to meet changing economic conditions and the professional and personal needs of our members.

The major emphasis this year has been in the area of medical malpractice. Here the situation has not been good, although a few gains have been made. The 1976 Regular Session of the State Legislature ignored our recommendations for malpractice legislation, with the Senate and House of Delegates passing widely divergent bills on which they could reach no compromise. An Ad Hoc Committee on Medical Malpractice has been formed under the able chairmanship of Dr. William E. Gilmore of Parkersburg to assist in this complicated and urgent matter.

Aetna Life and Casualty, which insures the bulk of the state physicians against malpractice, has recommended several approaches in an effort to improve our malpractice experience. At its request, district panel review committees of physicians have been organized to review selected malpractice claims. Already a number of cases has been reviewed by these panels.

Because malpractice insurance continues to be a factor of such major concern, both individually and collectively, for members of our Association, we have asked the Aetna to provide a summary of activities under the Mutual Association group program, including comments relating to legislation, the loss control program, and other related areas. Also included in the report is an update of the group disability, life, and affiliated plans.

The Aetna Report

"Since the West Virginia State Medical Association Professional Liability Program began in December of 1972, the goal of Aetna has been to continue to insure the physicians of West Virginia against medical malpractice exposures and to do so at an equitable profit. In an effort to do this we set three objectives: (1) a loss control program with the district claim review panels as principal components; (2) education of physicians on additional ways to improve the practice of good health care, and (3) participation in, and augmentation of, the Association's efforts to effect remedial tort legislation. While success has not been total, there have been areas of improvement that warrant cautious optimism.

"The implementation of panel review districts got a shot in the arm because of the excellent efforts of Charles R. Lewis, the Association's Executive Secretary. Four panels are operational and five cases have been reviewed (as of early May, 1976). Nine more cases are being scheduled for review. The four Districts are chaired by Drs. Justus C. Pickett of Morgantown, A. J. Villani of Welch, Harry S. Weeks, Jr. of Wheeling; and John F. I. Zeedick of Charleston, who have been helpful in every respect. We feel the knowledge gained from thse reviews has been valuable to the participating physicians, our defense attorneys, and the Aetna. We have encountered reluctance on the part of some physicians to participate, but we feel this hesitancy will lessen as our mutual experience in the program increases.

"In addition to the education derived from the case reviews, we have addressed 12 Society and ancillary groups, disseminated educational material, prepared articles for the *West Virginia Medical Journal,* and have made frequent reports to the State Medical Association on a variety of subjects. Although the lines of communication are improving significantly, much remains to be accomplished.

"Remedial legislation has not occurred. Despite the Medical Association's and Aetna's mutual efforts, we hold out little hope for positive action on the part of the Legislature this year. We were successful in our dealings with the Legislative Subcommittee on Health. House Bill 1213 and Senate Bill 263 as originally introduced this past general session contained numerous tort reforms which would have ameliorated many of the State's medical malpractice woes.

"However, in early March the Senate passed an amended SB 263 which was radically different from the bill originally introduced. It closely resembled the proposal made by Gov. Arch A. Moore, Jr., that would have set up a State malpractice corporation, requiring participation by all hospitals and physicians as a condition for licensure. The House passed a bill that provided for a joint underwriting association and a "written consent" form, but nothing more. A House-Senate Joint Conference Committee effort to resolve differences in the bills brought some agreement as to a joint underwriting association, but the Senate rejected the conference report and the legislation died.

"If the Legislature fails to address the issues of tort reform, chances that Aetna might consider continuing its program of writing professional

liability coverages for physicians in West Virginia beyond December 31, 1977, might be in jeopardy. The JUA is at best a temporary solution to the availability problem, and a state-run insurance corporation fails to go to the heart of the situations that have created the medical malpractice problems in this State.

"In order for us to have any chance to turn this thing around, we are going to have to have the grass-roots support of the physicians and we are going to have to work to overcome an apparent antagonism at least some legislators have reflected toward the medical profession," Aetna has noted.

Group Disability, Life, and Affiliated Coverages

Our group disability, life, and affiliated plans continue to provide sound protection at low group rates. The strong support of our membership fully attests to the effectiveness and performance of our program . . . over 900 members are currently enrolled.

The Program includes eight separate plans, each providing a vital form of personal protection and designed for maximum flexibility. Plans are continually monitored and revised to today's needs.

From the coverages available, a member can assemble a complete "package" of health and life protection tailored to his individual needs. With this broad choice has come the inevitable necessity of putting the various plans in proper order. The "Portfolio of Insurance" is designed to meet this need. The portfolio was distributed several years ago. If a member finds that his portfolio is either worn out or lost, he or she should notify our group office. A new one will be promptly furnished. Benefits offered under the various plans are outlined below:

—Long-Term Disability Income Protection: benefits up to $2,000 a month;

—Office Overhead Insurance: benefits up to $3,500 a month;

—Family Catastrophe Hospitalization: benefits up to $15,000;

—Low Cost Life Insurance: benefits up to $50,000;

—Accidental Death Insurance: benefits up to $100,000;

—Hospital Money Plan: benefits up to $100 a day;

—Million Dollar Liability: covers malpractice plus personal liability; and

—Mutual Funds-Fixed and Variable Annuities: all qualified under HR-10.

The continued upward trend in office operating expenses, including salaries, rent, insurance and especially in malpractice insurance, prompted the revision this year in the Office Overhead Plan to a new limit of $3,500 a month.

Service continues to be a central priority in the operation of our Program. All administrative services, including the processing and payment of claims, are provided by our Resident Administrator. An experienced staff furnishes complete policyholder service, including a fully computerized accounting system, payment of claims and personal consultation for programming plans to meet individual needs. Time and experience have proven the fundamental advantage of the "On-the-Ground" service to our members.

Respectfully submitted,

Lyle D. Vincent, M. D.
Chairman

John T. Chambers, M. D.
R. U. Drinkard, M. D.
L. Walter Fix, M. D.
F. Perry Greene, Jr., M. D.
H. Summers Harrison, M. D.
James A. Heckman, M. D.
Upshur Higginbotham, M. D.
C. A. Hoffman, M. D.
Kenneth C. MacDonald, M. D.
Buford W. McNeer, M. D.
C. Vincent Townsend, M. D.

May 24, 1975

Cancer Committee

Two meetings of the Cancer Committee were held during the past year. The first was at the Greenbrier Hotel on August 22, 1975, which was called to order by Dr. David B. Gray of Charleston.

Other members present included Drs. Hu C. Myers of Philippi, Catalino B. Mendoza, Jr., Clarksburg; John W. Trenton, Kingwood; L. Walter Fix, Martinsburg; and Alvin L. Watne, Morgantown.

Guests at the meeting included Dr. N. H. Dyer, Director of the State Department of Health; Dr. William L. Cooke, Director of the Disease Control Division of the State Department of Health; Dr. William E. Gilmore of Parkersburg; Dr. Leslie F. McCoy of Charleston, Director of Medical Services, West Virginia Division of Vocational Rehabilitation; and Mr. Bob Bradford of Charleston, Executive Vice President, American Cancer Society, West Virginia Division.

Doctor Cooke reported on the lack of adequate funding by the West Virginia Legislature for the Division of Cancer Control. He spoke briefly about Senate Bill No. 26 which was passed by the Legislature in 1943 which permits complete service in regards to the control and care of cancer patients. Unfortunately, this act has never been properly implemented because of limited appropriations. Doctor Cooke stated that less than five per cent of known cancer patients are helped by the Division of Cancer Control. Doctor Dyer discussed decreasing reporting of cancer cases to the State Cancer Registry and urged that this situation be rectified by the various hospitals.

Mr. Bradford noted that the volume of patients interviewed by the Reach to Recovery volunteers has doubled in the past year. He also noted that the first entero-stomal therapist had been employed in West Virginia and that a second one was soon

expected to be hired. He remarked that the American Cancer Society has been working with tumor registrars throughout the state, including regional meetings, on a continuing basis.

This meeting was adjourned with recommendation that a mid-winter conference be held in Charleston in conjunction with the Mid-Winter Clinical Conference.

The second meeting of the Cancer Committee of the West Virginia State Medical Association was convened at 8:30 A.M. at the Daniel Boone Hotel, January 31, 1976, at the time of the Ninth Mid-Winter Clinical Conference. The following members were present for this meeting:

Drs. James P. Carey of Huntington, Chairman; S. William Goff, Parkersburg, and Doctors Gray, Mendoza, Myers, and Watne.

Guests were Doctors Cooke and McCoy, and Dr. Honoruto Abadilla, Doctor's Memorial Hospital, Welch.

The minutes of the last meeting at the Greenbrier Hotel were read and approved.

Doctor Watne noted that the annual Cancer Day at West Virginia University was scheduled for April 2 and 3 and that this meeting would be on the general subject of head and neck cancer.

Doctor Goff noted the difficulties of establishing Cancer Registries in the Parkersburg area and noted that the hospital in which the cobalt therapy unit was located did not have a Cancer Registry approved at the present time. There was general discussion regarding the organization and approval of Cancer Registries throughout the State in individual hospitals. It was observed that some hospitals had negotiated contracts with third parties by which a line item charge could be made for the Cancer Registry.

Doctor Cooke offered to have a copy of the State law under which the Division of Cancer Control operates sent to each member of the committee. He also remarked, regarding the State Cancer Registry, that it covered approximately 65 per cent of the hospital beds within the State and that the cost of maintaining same was about $23,000 a year and he wondered if this activity was worthwhile to be continued. After some discussion, Doctor Gray made the motion, seconded by Doctor Goff, that the Cancer Registry should be continued, and this was passed unanimously.

It was noted by Doctor Watne that there exists an organization of Tumor Registry secretaries which meets twice yearly at the present time. He suggested that the State Registry and this organization mutually may support each other and also that Dr. Andrew Mayer's office of the American College of Surgeons may supply information as well as expert advice to the State Registry.

Doctor McCoy suggested that cancer screening tests might be added to the routine examinations done by the Division of Rehabilitation. Said examinations amount to some 20,000 per year within the State of West Virginia. Doctor McCoy asked for some advice from the committee as to details of adding proctoscopic examinations, Pap smears and perhaps other procedures to these examinations. Doctor Mendoza was appointed to work with Doctor McCoy on the details of this program.

Mr. Bradford then spoke briefly for the American Cancer Society, West Virginia Division, and offered the following suggestions to the committee:

1. There is a pressing need for cancer "quackery" legislation to be passed by the West Virginia Legislature.

2. The American Cancer Society's book on clinical oncology will be offered to the members of the State Medical Association by the Association's Journal at $2.50 per copy, which is the cost of this informative and valuable book.

3. The West Virginia State Medical Association should adopt a resolution on the hazards of smoking.

4. The West Virginia State Medical Association should formally adopt a resolution endorsing the Reach for Recovery Rehabilitation Program of the American Cancer Society.

5. The professional audio-visual tapes and publications of the American Cancer Society should be reviewed to determine credit hours available for continuing medical education credits to doctors of medicine as well as, possibly, osteopathic physicians.

Following general discussions of these suggestions, the meeting was adjourned.

(On April 2 and 3, Cancer Day was held at West Virginia University with William Jesse, M. D., and Robert Lindberg, M. D., of the M. D. Anderson Hospital in Houston being the guest speakers for the occasion. This meeting was very concentrated, enlightening and worthwhile to all physicians who have any contact with cancer in the head and neck area. It is to be regretted that more members of the West Virginia State Medical Association did not attend this meeting and it is hoped attendance at these annual Cancer Days will increase in future years.)

Respectfully submitted,

James P. Carey, M. D.
Chairman

June 7, 1976

Medical Education and Hospitals Committee

The activities of the committee were confined during the 1975-76 year to the area of Continuing Medical Education. A Subcommittee on Accreditation of CME Programs was appointed. The subcommittee consists of: T. Keith Edwards, M. D., of Bluefield; George M. Kellas, M. D., of Wheeling; and, Mary Lou Lewis, M. D., of Charleston. This subcommittee was charged with reviewing survey team reports of programs within the State seeking

CME accreditation and recommending approval or disapproval to the entire Committee on Medical Education and Hospitals. By adopting this mechanism and by use of a mail ballot rather than waiting for an annual meeting of the full committee, the process of accrediting CME Programs within the State was considerably streamlined.

Survey teams visited and evaluated four CME programs during the current year. Survey team reports were subsequently evaluated by the Subcommittee on Accreditation and recommendations fowarded to the committee regarding these four programs. The programs visited and the results of the committees' actions were as follows:

1. West Virginia Obstetrical and Gynecological Society, *Action*: Full three-year accreditation recommended and adopted by the committee.
2. Ohio Valley Medical Center, Incorporated and Wheeling Hospital (Joint Program), *Action*: Two-year provisional accreditation recommended and adopted.
3. Broaddus Hospital—Myers Clinic, *Action*: Full three-year accreditation recommended and adopted.
4. Charleston Area Medical Center (re-survey), *Action*: Full three-year accreditation recommended and adopted.

The Chairman regrets that owing to the pressures of preparing for a site visit by the American Medical Association survey team for the newly developed program at West Virginia University School of Medicine and the duties involved in implementing that program, he was unable to devote more time to this committee's work. It is his recommendation that he continue on the Medical Education and Hospitals Committee, but not be asked to serve as its Chairman.

Respectfully submitted,
N. LeRoy Lapp, M. D.
Chairman

June 10, 1976

Medical Aspects of Sports Committee

The past year has been one of general reorganization of this committee. New members have been added in an attempt to bring in young physicians with specific interest in athletic medicine, being selected from areas which would give the committee better representation throughout the state.

The primary thrust of the committee's efforts this past year has been towards improving medical care for athletic injuries occurring in our organized school system, primarily at the junior and senior high school levels. The seriousness of the problem was communicated by a letter to the President of the West Virginia Board of Education requesting cooperation from the board in arriving at a solution. Emphasis in this regard was placed in a request that county boards of education familiarize themselves with the athletic training curriculum at West Virginia University. It was further recommended that efforts be made to place faculty members with a minor in athletic training in as many schools as possible.

The magnitude of this problem has also been brought to the attention of the component medical societies through correspondence to the secretary of each society. It was recommended that the individual component medical societies insure the availability of a physician to evaluate, treat, or refer as indicated in all such injuries.

The committee is currently involved in the development of a statement concerning what constitutes an acceptable pre-season athletic physical examination, and recommendations regarding pre-season conditioning programs, prevention of heat illness and acceptable protective equipment.

Respectfully submitted,
K. Douglas Bowers, Jr., M. D.
Chairman

May 6, 1976

Venereal Disease Committee

The Venereal Disease Committee met in Charleston on June 4, 1976, for a luncheon meeting. Members present were Drs. N. H. Dyer of Charleston, Chairman; William L. Neal, Huntington; Isaiah A. Wiles, Morgantown, and Lyle D. Vincent, Parkersburg. The Chairman reviewed the major points discussed during the previous committee meeting and related the results from action initiated on several of the topics.

Preventive medical care of individuals exposed to venereal disease, upgrading emergency room care for the venereal disease patient, education in the private and public sectors, and decreasing clout of medical groups (private and public) with our legislative governmental bodies were the issues which the committee addressed themselves to during the session. There was much concern voiced by the committee members that the State Medical Association is not providing in its program agendas at the major medical conferences in the state papers on many subject matters that the average practicing physician is faced with on a daily basis and, in too many instances, matters in which the physician is not prepared to employ today's recommended diagnostic treatment approaches. Of particular concern is the lack of program emphasis on venereal disease, which is presently a major disease entity in the state and the nation's number one communicable disease problem.

The group unanimously approved a suggestion to develop a resolution to be presented to the House of Delegates at the annual conference in August. The resolution will urge immediate action by the Association to insure appropriate program segments of gonorrhea and the other sexually transmitted diseases at the State Association conferences and other state or regional medical meetings.

Respectfully submitted,
N. H. Dyer, M. D.
Chairman

June 7, 1976

The West Virginia Medical Journal

Vol. 72, No. 9 September, 1976

A Current Concept Of The Pathophysiology Of The Hyperglycemia Of Diabetes Mellitus*

Thomas G. Skillman, M. D.

Abstract

The difficulty in controlling the hyperglycemia of diabetes continues to perplex the clinician and stimulate the investigator. During the past two decades, refinements in laboratory methodology have permitted measurements of hormonal fluctuations which have previously been impossible. As a direct result of the ability to quantitate specifically serum insulin and glucagon, a new hypothesis to explain both the hyperglycemia and ketosis of diabetes has been advanced. This discussion will review the multiple contributions which have led to the hypothesis that human diabetes is a result not only of relative or absolute insulin deficiency, but also excessive glucagon secretion.

The Author

- **Thomas G. Skillman, M. D., Ralph W. Kurtz Professor of Endocrinology, Department of Medicine, The Ohio State University College of Medicine, Columbus.**

The Insulin Deficiency Concept

Tradition has supported the hypothesis that diabetes is essentially a disease of insufficient insulin secretion. The fact that diabetes may be experimentally induced by either pancreatectomy or the administration of a substance which injures the beta cells supports this concept. Also, the fact that insulin administration corrects both the hyperglycemia and ketosis of diabetes strengthens the insulin deficiency theory.

When Berson and Yalow first reported that insulin levels were quite high in certain diabetics, a definite challenge to the insulin deficiency hypothesis was made;[1] however, it was shown that usually only obese diabetics secrete excessive insulin.[2] An excellent evaluation of insulin secretion in normal and diabetic subjects is provided by Genuth and summarized in Table 1.[3] Most investigators report similar findings;[4,5] however, our laboratory studied a large number of diabetics by measurement of insulin responsiveness to oral glucose and found that certain lean diabetics with normal fasting serum glucose secreted as much or more insulin than age- and weight-matched nondiabetics.[6] The latter study also disclosed that there was rarely a precise correlation between insulin and glucose values and suggested that factors other than the degree of obesity might exercise a role in glucose-insulin interrelationships. Such a factor might be a deficiency in insulin receptors[7] or a relative excess of glucagon.

Glucagon has long been a theoretical candidate to explain the lack of a tight interdependence between serum insulin and glucose concentrations in diabetes. A comparison between the opposing physiological effects of insulin and glucagon is given in Table 2.

Physiologic Roles of Insulin and Glucagon in Normal Man

Insulin may be characterized as the "feeding hormone." Its concentration rises promptly after carbohydrates or protein absorption and remains

*From a review presented during the 108th Annual Meeting of the West Virginia State Medical Association, August 20-23, 1975, at The Greenbrier, White Sulphur Springs.

TABLE 1
Estimated Daily Peripheral Insulin Secretion Rates in Normals and Diabetics*

	Units Per Day
Normal	
Lean	31
Obese	114
Diabetic	
Juvenile	4
Lean Adult	14
Obest Adult	46

*Modified from Genuth.[3]

elevated until the serum glucose returns to a basal level. The actions of the high levels of insulin observed after eating have been characterized as favoring the storage of ingested foodstuffs as macromolecules. Insulin stimulates the storage of ingested carbohydrate as liver glycogen and acts on the muscle and adipose tissue compartments of the body to facilitate the uptake of glucose from blood so that these tissues may store glycogen and triglycerides. High levels of insulin also facilitate the transport of amino acids from blood to the peripheral tissues and stimulate protein synthesis. During the storage process, insulin also decreases the rate of lipolysis and conserves adipose tissue energy for release during the fasting state.

Less insulin is secreted in the basal state. During fasting, the peripheral insulin secretion has been estimated to be about one unit per hour.[3] This reduced secretion provides serum insulin concentrations of 5 to 25 uU/ml. compared to levels of 50-150 uU/ml. seen with feeding. The lower insulin levels of fasting allow moderate lipolysis and, during a day's fast, one to three thousand calories to be mobilized from adipose tissue. The low fasting insulin levels still moderately limit the rate of free fatty acid release and prevent significant ketone formation.

TABLE 2
Contrasting Effects of the Key Actions of Insulin and Glucagon on Carbohydrate, Protein and Fat Metabolism

Metabolic Effects On:	INSULIN *Feeding Hormone*	GLUCAGON *Fasting Hormone*
Carbohydrate		
Uptake of Glucose by Muscle and Adipose Tissue	Stimulation	No Effect
Glycogen Synthesis by Liver "Glycogenesis"	Stimulation After Feeding	Stimulation During Fasting
Glycogen Breakdown by Liver "Glycogenolysis"	Inhibition	Stimulation
Protein		
Uptake of Amino Acids by Muscle and Adipose Tissue "Protein Synthesis"	Stimulation	No Effect
Breakdown of Protein to Amino Acids, Then Glucose	No Effect	Stimulation
Fat		
Fat Synthesis by Liver, Muscle, Adipose Tissue "Lipogenesis"	Stimulation	No Effect
Fat Breakdown by Liver, Adipose Tissue	Inhibition	Stimulation

Glucagon was recognized in the 1920's as a factor in pancreatic extracts capable of elevating blood sugar. Purified pancreatic glucagon is now widely used to combat insulin-induced hypoglycemia. It has been shown that glucagon stimulates hepatic glycogenolysis and gluconeogenesis.[8] At present it is believed that glucagon secretion is very important for the maintenance of normoglycemia during fasting. Since brain cells store very little glycogen, and glucose is their preferred metabolic substrate, it is important that there be a mechanism to deliver glucose from the liver to the brain when dietary glucose is not available. It is estimated that the brain utilizes about 100 milligrams of glucose each minute. This would require a liver glucose output of at least 150 grams per day. As the liver is capable of storing only about half this much glycogen, gluconeogenesis is necessary during moderately long periods of fasting. Glucagon appears to regulate this system of glucose homeostasis and may be designated as the "fasting hormone."

The development of a specific radioimmunoassay for serum glucagon by Unger did much to clarify the rule of glucagon.[9] His early studies showed that in normal fasting man, the serum glucagon is maintained at a rather fixed concentration. After food absorption, however, glucagon levels were noted to drop about 30 to 40 per cent. The lower level persisted until postprandial glucose levels approached basal values.[10]

Other workers have shown that glucagon possesses significant lipolytic activity. Studies in normal man indicate that infusion of large amounts of glucagon stimulate the liver to release fatty acids and glycerol.[11] This property of glucagon suggests that glucagon may play a role in the excessive lipolysis of diabetic ketogenesis.

Insulin and Glucagon in Diabetic Man

Recent work has shown that glucagon secretion differs when a comparison is made between normal and diabetic man. Table 3 summarizes the responses of serum glucagon in normals and diabetics. When the nondiabetic ingests food, glucose rises moderately, peaks quickly and there is a prompt *fall* in serum glucagon. In diabetes,

insulin secretion is usually delayed or subnormal, and glucose concentrations peak later. In diabetic man the absorption of food and elevation of glucose are not associated with a fall in serum glucagon.[10] When it was first learned that glucagon did not fall after food ingestion in diabetes, the biological significance of this fact could not be established and many believed that the influence of glucagon on carbohydrate homeostasis might be of only minor importance. Unger, however, proposed that diabetes was a bihormonal disorder and postulated that glucagon played an important role.[12] Rather fortuitously, an agent capable of restraining glucagon secretion was discovered and the opportunity to investigate glucagon's significance was available. In 1973, Siler *et al* reported the isolation of a tetradecapeptide extracted from sheep hypothalmus which had the ability to inhibit the secretion of pituitary growth hormone.[13] Within a short time, it was found that this small peptide, now known as somatostatin, suppressed the secretion of gastrin, insulin and glucagon.[14]

These findings quickly led to studies in normal subjects and diabetics. Gerich *et al* infused the peptide in insulin-dependent diabetic volunteers and found that a small dose lowered serum glucagon. In addition, they found that somatostatin combined with insulin completely abolished diabetic postprandial hyperglycemia. They estimated that glucagon secretion accounted for about 25 per cent of the fasting hyperglycemia of insulin-requiring diabetics. They extended their studies to evaluate the role of glucagon in the pathogenesis of human diabetic ketoacidosis.[16] In a critical experiment, they prepared seven lean insulin-requiring diabetic men by infusing insulin for 14 hours at a rate of one unit per hour. This established plasma glucose, glucagon and ketoacid levels which were near normal. They then stopped the insulin infusion and during the next nine hours observed the development of mild ketoacidosis. In a companion study on the same subjects, they found that it somatostatin infusion was begun at the same point in time as insulin withdrawal, the previously observed hyperglycemia and ketonemia could be prevented. They convincingly showed that the prevention of ketoacidosis by somatostatin was not the result of growth hormone inhibition or excessive cortisol secretion. They concluded that insulin lack per se was not the cause of ketoacidosis and that glucagon, through its gluconeogenic and lipolytic actions, was a prerequisite for ketoacidosis.

TABLE 3

Differences in Response to Feeding in Normal and Diabetic Men

	Normal Man	*Diabetic Man*
Serum Glucose	Rises Moderately	Rises Markedly
Serum Insulin	Rises Significantly	Rises Variably
Serum Glucagon	Falls Promptly	Does Not Fall

Many more investigations are in progress and, in time, the precise role of glucagon in diabetes will be established. At present, it seems prudent to accept the fact that glucagon secretion is an important determinant of glucose and lipid homeostasis. It is now known that the alpha cells of the pancreas are not the only source of "pancreatic glucagon." Cells in the fundus of the stomach also appear to contain and secrete glucagon.[17] This fact probably explains why serum glucagon levels do not fall to zero after total pancreatectomy. Furthermore, Unger states that there is no situation in man in which there is fasting hyperglycemia which is not also associated with hyperglucagonemia. He has reported elevated glucagon levels in non-ketotic diabetic coma, after thermal injury and during stress.[17]

Bihormonal Hypothesis

From the above data, it is very tempting to accept the hypothesis that both the hyperglycemia and ketosis of uncontrolled diabetes are associated with inappropriate glucagon secretion. The "underutilization" of glucose characterized by a sluggish uptake of glucose by muscle and adipose tissue may be ascribed to a deficiency in insulin. The "overproduction" of glucose characterized by an increase in hepatic glucose output and fasting hyperglycemia may be explained by a relative excess of glucagon action.

References

1. Berson, S. A., and Yalow, R. S.: Immunoassay of Endogenous Plasma Insulin in Man. J. Clin. Invest. 39:1157-75, 1960.
2. Kreisberg, R. A.; Boshell, B. R.; DiPlacido, J., and Roddam, R. F.: Insulin Secretion in Obesity. New Eng. J. Med. 276:314-319, 1967.
3. Genuth, S. M.: Plasma Insulin and Glucose Profiles in Normal, Obese and Diabetic Persons. Ann. Intern. Med. 79:812-822, 1973.
4. Stern, M. P.; Farquhar, J. W.; Silbers, A. *et al*: Insulin Delivery Rate into Plasma in Normal and Diabetic Subjects. J. Clin. Invest. 47:1947-1957, 1968.
5. Kipnis, D. M.: Insulin Secretion in Diabetes Mellitus. Ann. Int. Med. 69:891-901, 1968.
6. Chiles, R., and Tzagournis, M.: Excessive Serum Insulin Response to Oral Glucose in Obesity and Mild Diabetes. Study of 501 Patients. Diabetes. 19:458, 1970.
7. Cuatrecasas, P.: The Insulin Receptor. Diabetes 21 (Supplement 2):396, 1972.
8. Marliss, E. B.; Aoki, T. T.; Unger, R. H. *et al*: Glucagon Levels and Metabolic Effects in Fasting Man. J. Clin. Invest. 49:2256-2270, 1970.

9. Unger, R. H.; Eisenstraut, A. M.; McCall, M. S. *et al*: Measurements of Endogenous Glucagon in Plasma and the Influence of Blood Glucose Concentration Upon Its Secretion. J. Clin. Invest. 41:682-689, 1962.
10. Unger, R. H.; Aguilar-Parada, E.; Muller, W. A. *et al*: Studies of Pancreatic Alpha Cell Function in Normal and Diabetic Subjects. J. Clin. Invest. 49:837-848, 1970.
11. Liljenquist, J. E.; Bomboy, J. D.; Lewis, S. B. *et al*: Effects of Glucagon on Lipolysis and Ketogenesis in Normal and Diabetic Men. J. Clin. Invest. 53:190-197, 1974.
12. Unger, R. H., and Eisenstraut, A. M.: Entero-Insular Axis. Arch. Int. Med. 123:261, 1969.
13. Siler, T. M.; Vandenberg, G., and Yen, S. S. C.: Inhibition of Growth Hormone Release by Somatostatin. J. Clin. Endocrin. 37:632-634, 1937.
14. Koerker, D. J.; Ruch, W.; Chideckel, E. *et al*: Somatostatin: Hypothalmic Inhibitor of the Endocrine Pancreas. Science. 184:482-484, 1974.
15. Gerich, J. E.; Lorenzi, M.; Schneider, V. *et al*: Effects of Somatostatin on Plasma Glucose and Glucagon Levels in Human Diabetes. New Eng. J. Med. 291:544-547, 1974.
16. Gerich, J. E.; Lorenzi, M.; Bier, D. M. *et al*: Prevention of Human Diabetic Ketoacidosis by Somatostatin. New Eng. J. Med. 292:985-989, 1975.
17. Unger, R. H.: Personal communication.

Manuscript Information

Manuscripts to be presented for publication in *The West Virginia Medical Journal* should be typewritten, triple-spaced, on one side only of firm (no onion skin or flimsy), standard letter sized (8 1/2 by 11 in.) white paper. Wide margins (at least 1 1/4 in. on left) should be left free of typing. On the first or title page should be shown the title of the article, the name (or names) of the author, and his degrees. Pages should be numbered consecutively, the page number being shown in the right upper corner along with the surname of the author.

Authors are requested to submit a carbon copy with the original.

Illustrations should be numbered and their approximate locations shown in the text. Each should be identified by placing on its back the author's name, its number and an indication of its "top." Drawings and charts intended for reproduction should be done in black (India) ink on pure white. Photographs should be on glossy paper and minimum of about 5 by 7 in. in size. A legend should be provided for each illustration and, preferably, attached to it.

All scientific material appearing in *The Journal* is reviewed by the Editorial Board. Manuscripts should be mailed to The Editor, West Virginia Medical Journal, Box 1031, Charleston, W. Va. 25324.

Mixed Primary Bronchogenic Carcinoma Presenting As A Solitary Pulmonary Nodule

Edwin C. James, M. D.; and William A. Meriwether, M. D.

BRONCHOGENIC carcinoma assumes a significant statistical role in virtually every major tumor registry. By comparison, multiple primary bronchogenic carcinomas are seldom mentioned and an accurate estimate of their status remains undetermined. The careful evaluation of data from both clinical and autopsy material, however, indicates they are neither common nor rare. Actually, their true incidence may be somewhere in the range of one to two per cent.[1,2] Additionally, for patients cured of an initial carcinoma, the threat of a subsequent primary carcinoma may approximate six to seven per cent.[3,4]

Except for the occasional adeno-epidermoid carcinoma combination, mixed bronchogenic carcinoma involving other primary types is notably rare. Therefore, our experience with a case of oat cell-epidermoid carcinoma presenting as a solitary pulmonary nodule prompted this report and resumé of the literature. The only similar case we could identify is that described by Newman and Adkins[5] in which a contiguous oat cell-papillary adenocarcinoma was reported as part of a triple primary bronchogenic carcinoma.

The Authors

- **Edwin C. James, M. D., Associate Professor of Surgery, Department of Surgery, West Virginia University School of Medicine, Morgantown; and William A. Meriwether, M. D., Assistant Professor of Pathology, University of Texas School of Medicine, San Antonio.**

Case Report

A 59-year-old caucasian male with suspected duodenal ulcer disease was admitted to the gastroenterology service at Madigan Army Medical Center in Tacoma, Washington, on July 28, 1973. His admission chest roentgenogram revealed a solitary pulmonary nodule in the left upper lobe (Figure 1). There were no significant cardiopulmonary symptoms. Pertinent history included

Figure 1. Solitary pulmonary nodule: left upper lobe (black arrows).

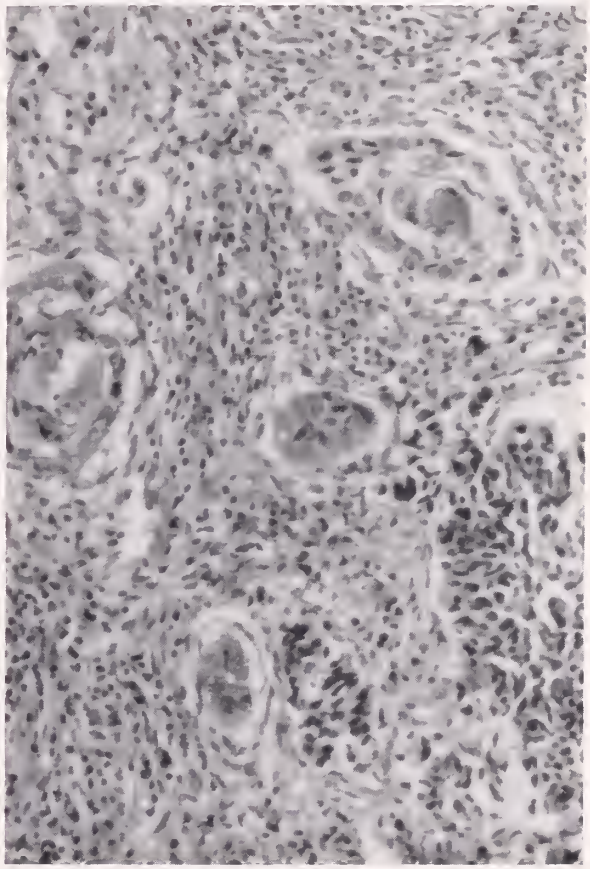


Figure 2a. Continguous epidermoid, oat cell carcinomas—63X.

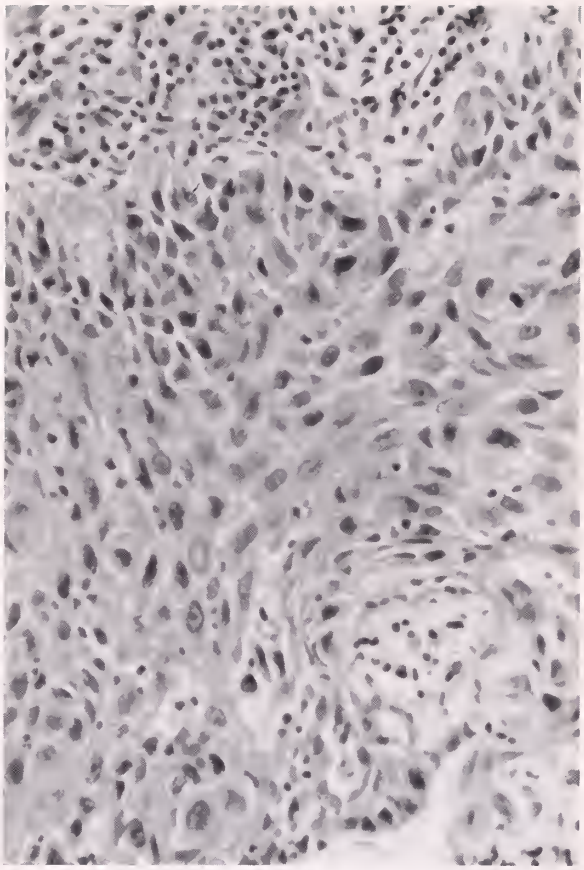


Figure 2b. Epidermoid carcinoma—160X.

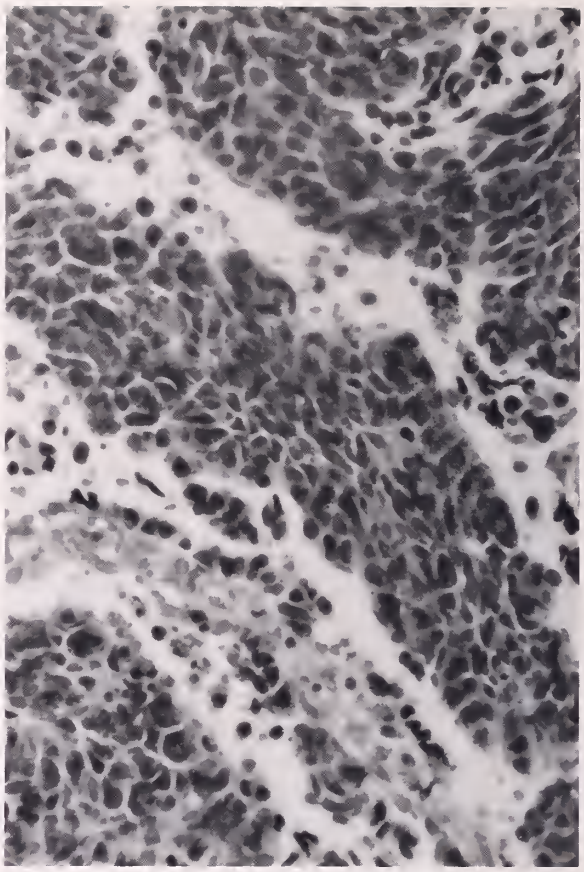


Figure 2c. Oat cell carcinoma—160X.

an 80-pack per year smoking habit. Physical and laboratory evaluations were unrevealing.

On August 22, 1973, a left upper lobectomy was performed. The resected specimen demonstrated a two-by-two cm. solitary tumor, which on histopathologic examination demonstrated a confluent epidermoid-oat cell carcinoma originating from contiguous areas of bronchial mucosa (Figure 2). No intervening normal mucosa could be identified. Hilar and mediastinal lymph nodes were free of metastases. The patient made an uneventful recovery but eventually succumbed to suspected recurrent disease approximately 30 months later. An autopsy was not performed.

Discussion

Billroth[6] first alluded to the propensity of cancer patients to acquire additional primary cancers; accordingly, his concepts are frequently cited as prerequisites for their diagnosis. In essence, he theorized that in order for coexistent or successive neoplasms to be independent, each had to (1) demonstrate different histology, (2) originate separately or in a different organ site, and (3) manifest its own metastases. Obviously, the complete acceptance and utilization of his criteria would preclude the recognition of more than an occasional instance of multiple primary malignancy.

Beyreuther[7] recorded the first case of coexistent primary bronchogenic carcinomas in a patient identified at autopsy to harbor an epidermoid carcinoma of the right middle lobe in association with an adenocarcinoma in the opposite lung. Since this classic report, several reviews in the literature have reflected a certain inconsistency regarding the current status of patients with more than one primary bronchogenic carcinoma. Authors who rigidly employ the postulates of Billroth disclaim much of the recorded earlier experience.[8,9] Others consider the diagnosis of multiple carcinomas reasonable only if the gross and microscopic features of each correspond to neoplasms typical for lung and a metastatic association can be practicably excluded. Cases which demonstrate carcinomas of either similar or different histology qualify in this clinical situation. If one accepts the theory of multicentricity of origin for bronchogenic carcinoma, all anatomic lobe and lung combinations also qualify. Although the determination of independence may not be possible for all cases manifesting carcinomas of similar histol-

ogy, most should be apparent based on the evidence available. It is imperative to document the origin of each carcinoma from bronchial mucosa. Implantation or embolization from another carcinoma source must be excluded. Extrapulmonary neoplasms of similar histologic identification should not be evident. We submit that the case reported represents the rare occurrence of two primary bronchogenic carcinomas originating independently from contiguous areas of bronchial mucosa. We have selected the term "mixed primary bronchogenic carcinoma" to designate this unusual but understandable presentation of multiple primary lung cancer.

Summary

Mixed primary oat cell-epidermoid bronchogenic carcinoma presenting as a solitary pulmonary nodule is a rare occurrence. The case history of a patient with this lesion is reported and discussed. An attempt is made to distinguish this as another form of multiple primary lung cancer. Comments are made regarding reasonable versus absolute criteria for diagnosis.

References

1. Razzuk, M. A.; Pockey, M.; Urschel, H. C., Jr., and Paulson, D. L.: Dual Primary Bronchogenic Carcinoma. Ann. Thor. Surg. 17:425, 1974.
2. Robinson, C. L. N., and Jackson, C. A.: Multiple Primary Cancer of the Lung. J. Thorac. Surg. 36:166, 1958.
3. Legal, Y., and Bauer, W. C.: Second Primary Bronchogenic Carcinoma. J. Thorac., Cardiovasc. Surg. 41:114, 1961.
4. Smith, R. A.: Development and Treatment of Fresh Lung Carcinoma after Successful Lobectomy. Thorax. 21:1, 1966.
5. Newman, W., and Adkins, P. C.: Three Primary Carcinomas of the Lung Arising in a Left Lower Lobe with Metastases of Two of the Tumors. J. Thorac. Surg. 35:474, 1958.
6. Billroth, T.: General Surgery, Pathology and Therapeutics. Additions by Winiwater. Translated by Hackey, C. E. New York: Appleton Century Crofts, 765, 1889.
7. Beyreuther, H.: Multiplicitat von Carcinomen bei einem fall von sog "Schneeberger" lungen krebs mit tuberkulose. Virchows Arch. Pathol. Anat. 250:230, 1924.
8. Mobley, D. F., and Martinez, A. J.: Two Histologically Different Primary Carcinomas of the Lung, a Review of the Literature and Presentation of a Case. Cancer. 22:287, 1968.
9. Chaudhuri, M. R.: Independent Bilateral Primary Bronchial Carcinomas. Thorax. 26:476, 1971.

To be engaged in opposing wrong affords but a slender guarantee for being right.

William Gladstone

Medical Grand Rounds

From the West Virginia University Medical Center

Edited By

Raymond B. Weiss, M. D.

Associate Professor of Medicine

Small Cell (Oat Cell) Undifferentiated Lung Carcinoma

Discussants: Raymond B. Weiss, M. D.; Jesse J. Jenkins III, M. D.; And Gary D. Marano, M. D.

Raymond B. Weiss, M. D., Division of Medical Oncology.

Case History 1

A 62-year-old male was first seen in May, 1973, for complaints of right anterior chest pain and cough for two weeks. He had been a one-half-to-one pack/day cigarette smoker for over 40 years.

Physical examination revealed right supraclavicular adenopathy. A chest x-ray done by his referring physician showed a right upper lobe infiltrate and a large paramediastinal mass representing enlarged mediastinal lymph nodes. He was then referred to WVU Hospital.

A supraclavicular lymph node biopsy was done and interpreted as metastatic small cell undifferentiated carcinoma of the lung (Figure 1). Brain scan, liver scan, bone marrow biopsies, and bone scan were normal. There was no laboratory or physical examination evidence for paraneoplastic syndromes.

The patient was placed on a Cancer and Leukemia Group B (CALGB) protocol in which he was given two courses of cyclophosphamide (Cytoxan), vincristine (Oncovin), and methotrexate chemotherapy in high doses. Then he had 3200 r of Co^{60} in 10 fractions to the tumor, mediastinum, and supraclavicular areas. Next he was given four more courses of chemotherapy to complete seven months of total therapy. No further therapy was administered. The patient remains in complete remission with no evidence of tumor now 40 months after diagnosis. His chest x-ray shows some radiation fibrosis which does not cause any problems.

Case History 2

A 54-year-old male was well until four days before admission when he had transient memory loss and confusion. A routine chest x-ray at his local hospital was abnormal, and he was referred to WVU Hospital. The serum potassium was 3.3.

He denied any chest symptoms, and he had been on no medicines. He had been a two-to-three pack/day cigarette smoker for 25 years, but claimed to have quit 13 years previously.

The initial examiner described the patient as having a "ruddy complexion," and clubbing was noted. A chest x-ray showed a right hilar mass. Brain scan was normal, but liver scan was positive for metastases. Bronchoscopy and sputum cytology were negative, so mediastinoscopy was performed. The nodal tissue removed showed metastatic small cell undifferentiated carcinoma of the lung. Bone marrow exam showed metastatic tumor.

The initial electrolytes were: K3.6, Cl 94, Na 147, and CO_2 39. BUN was 26 and fasting glucose was 138. No further electrolyte studies were done until one month later when the tissue diagnosis of cancer had finally been made.

A medical oncology house-staff consultant saw the patient then and suspected the ACTH-secretion paraneoplastic syndrome on the basis of the hypokalemic alkalosis documented on the day of admission and at the local hospital. Repeat electrolytes were: K 3.2, Na 147, CO_2 37, Cl 96. A plasma cortisol level was over 100 μg per cent. The patient was to be transferred to the Medicine Service the next morning to begin a planned combined modality treatment program.

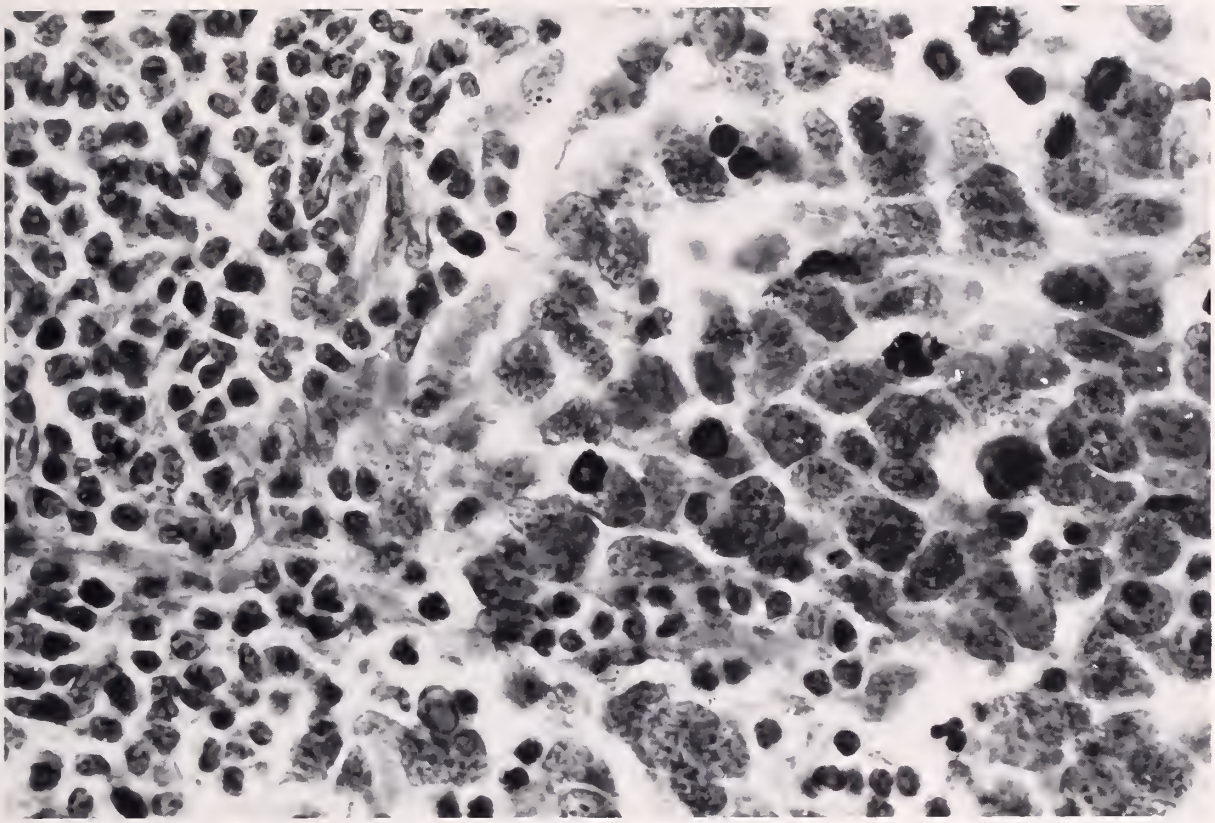


Figure 1. The lymph node biopsy from Patient No. 1. Groups of SCUC cells are growing in the peripheral sinusoids. H & E stain, 400X.

During that night the patient suddenly developed an acute abdominal catastrophe and had free air under the diaphragms on x-ray. Previously he had not had any abdominal complaints. Upon surgery a perforated gastric ulcer was found, presumably caused by the extremely high corticosteroid blood levels.

He had a very stormy postoperative course that included marked confusion which was presumed to be steroid psychosis. In spite of attempts to control corticosteroid production with metapyrone and treat the malignancy with chemotherapy, he died 12 days later (six weeks from onset of symptoms).

Discussion

American Cancer Society statistics estimate that about 900 deaths due to lung cancer and 1,000 new cases will occur in West Virginia in 1976. It is the most common fatal cancer in men and the third most common in women.

There are four major types of bronchiogenic carcinoma: (1) squamous or epidermoid, (2) adenocarcinoma and its variant alveolar carcinoma, (3) large cell undifferentiated, and (4) small cell undifferentiated. The latter type is known commonly as oat cell carcinoma. However, since the cancer-cell shape of this type can be round, polygonal, or spindle-shaped, it is preferable to use the more encompassing term, small cell undifferentiated carcinoma (SCUC). SCUC accounts for 11 to 19 per cent of the primary lung cancers,[1,2] so using the Cancer Society estimates, about 150 new cases of this cancer will occur in West Virginia annually, establishing it as a decidedly common disease.

The etiology of this disease in most cases is well-recognized—cigarette smoking. I used to say that I had not seen a single case in a non-smoker until this year, when I did see a case in a woman who had never smoked. Three reports in the literature document a very small number of cases of SCUC occurring in non-smokers.[1,3,4] Other etiologic associations known are occupational: certain types of mining and chloromethyl ether manufacturing.

Studies of uranium miners in Colorado and Arizona have shown a high incidence of SCUC developing a rather short time after the onset of radiation exposure, an average of 16 years.[5] It is the most common cell type of lung cancer developing in these miners, and there is a good correlation between having this cell type and a high level of individual radiation exposure. Other

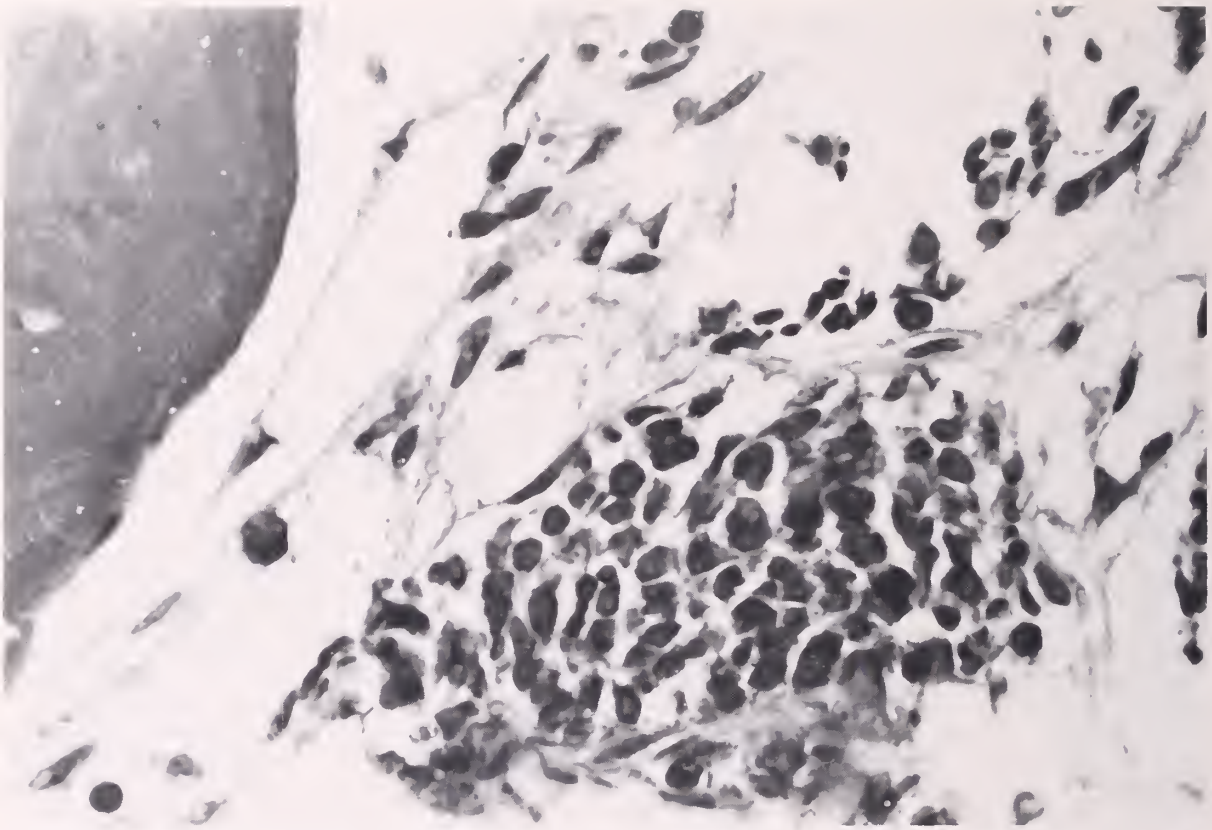


Figure 2. A small group of SCUC cells growing adjacent to a bone spicule in a bone marrow biopsy from a patient known to have SCUC. She had severe thigh and pelvic pain, but x-rays and a bone scan were normal. The bone marrow is a common, but frequently unrecognized, site for SCUC metastases. H & E stain, 400X.

miners of such substances as gold, fluorspar, cobalt, and arsenic have similar high incidences of SCUC.[5]

During a 10-year prospective study of 91 men exposed to chloromethyl ether in a Philadelphia chemical plant, 11 have developed lung cancer, all of which were SCUC type.[6] Four cases occurred in non-smokers. It is thus assumed that heavy exposure to this chemical also has an etiologic relationship to SCUC.

This tumor can appear at any age, but it has been said that it is more common in the younger patient than other types of lung cancer. However, data from the WVU Tumor Registry[2] refutes this impression. Of 31 patients under age 40 with lung cancer seen here from 1966 to 1975, seven (22 per cent) were SCUC, which was not significantly different from the incidence of SCUC in all ages (19 per cent). In a large series of SCUC patients from Memorial Hospital in New York, 72 per cent were age 50 to 70.[1] It does occur in young persons though; our youngest patient was age 31.[2]

Lung cancer, of course, affects primarily men. Of 1,061 lung cancers of all types seen at WVU from 1966 to 1975, 80 per cent were in males.[2] This same sex incidence held true when only patients with SCUC (total patients: 155) were compared; 78 per cent were male, 22 per cent female. This is in contrast to two other large series in which the incidence of this tumor in women was much lower; at Memorial Hospital,[1] women accounted for nine per cent and, at Barnes Hospital,[4] only five per cent. I have no explanation for this difference.

Clinical Presentation

There are few asymptomatic patients at the time of diagnosis, and the duration of symptoms is short. Many patients present with symptoms from metastases. Cough is the most common, occurring in 84 per cent in one series.[4] Some other common initial signs and symptoms in that series were fatigue, weight loss, chest pain, and hemoptysis. Only two patients were asymptomatic and had their lesions picked up on a routine chest film.

SCUC most often presents on chest x-ray as a hilar mass with mediastinal extension. The chest films of 114 SCUC patients at the Mayo Clinic were reviewed,[7] and only patients who still had relatively localized disease were studied. Of these, 76 per cent had a hilar prominence and, in 20 per cent, this was the only abnormality; 13 per cent had evidence of a mediastinal mass

or widening. Thirty-three patients (29 per cent) had a peripheral mass and, in 12, there was an associated hilar mass. Kato *et al's* study has similar figures.[4] Only 27 per cent had peripheral masses; the rest had a hilar mass and/or mediastinal widening.

The treatment of this cancer is different from that of the other three types, so it is important to make as correct a tissue diagnosis as possible. A major way of making a diagnosis of lung cancer is by bronchoscopic biopsy and/or bronchial cytology. Doctor Jenkins will now review the pathology of SCUC.

Pathology

Jesse J. Jenkins III, M. D., Assistant Professor of Pathology.

SCUC should be viewed as a highly distinctive tumor type rather than as an undifferentiated form of lung cancer. Azzopardi,[8] in 1959, described the histopathology in detail; the basic concepts he developed have not changed. The pleomorphic potential of the tumor cells and their various growth patterns needs to be recognized for accurate diagnosis, especially since there may be striking differences between SCUC as it grows in the lung and as it grows in lymph nodes. In the lungs it usually shows the classic best known feature: the small, dark, elongated "oat cell" nucleus with little cytoplasm. In lymph nodes the tumor cells tend to be larger, less hyperchromatic and spindly, and the cytoplasm more prominent. Some of the growth patterns demonstrated by SCUC that allow it to be differentiated from other "small cell" tumors such as lymphomas are: cell streaming and ribboning or the formation of pseudo-rosettes, rosettes, tubules, and ductules. Since some persons believe that deeply basophilic, strung-out material in the submucosa of a bronchial biopsy is almost pathognomonic of SCUC, it needs to be emphasized that "crush" or "spindling" artifact which is very common in biopsy material may produce similar basophilic, strung-out material in lymphomas, chronic inflammatory cells (mostly lymphocytes), or even carcinoid tumors. This artifact can render the diagnosis impossible unless other characteristics of the tumor are present.

Grossly, the growth pattern of SCUC in most cases is classic and unique among lung cancers. Bulky, intrabronchial growth is uncommon except as a late manifestation. Instead, with spread and growth along submucosal lymphatics, the mucosa becomes thick, rough, and discolored. They metastasize early, and tumor growth in regional nodes is almost always bulky, while the primary remains very small. Therefore, most presenting symptoms are due to metastatic disease.

Doctor Weiss:

It is well-known that SCUC has a frequent tendency to produce paraneoplastic syndromes, both neurological and polypeptide hormone types. The list of polypeptide hormones secreted by this cancer is long: adrenocorticotropin (ACTH),[9] corticotropin releasing factor,[10] melanocyte-stimulating hormore (MSH),[11] gonadotropins,[12] anti-diuretic hormone (ADH),[13] thyrocalcitonin,[14] renin,[15] and amylase[16] (Table 1).

In addition, SCUC can also produce the amine hormone serotonin, resulting in the typical carcinoid syndrome with excretion of high levels of urinary 5-hydroxindole acetic acid.[17] Parathormone (PTH) secretion with hypercalcemia is much more common in the epidermoid type,[18] but an occasional SCUC patient has been documented to produce PTH.[19,20]

Of the neurologic syndromes seen in occasional SCUC patients, the Eaton-Lambert myasthenic syndrome is a most interesting one.[21] These patients present with fatigue, weakness of proximal muscles, and decreased or absent deep tendon reflexes. The electromyographic (EMG) findings are characteristic: at slow rates (two per second) there is a progressive decline in the amplitude of muscle action potential, but with rapid (50 per second) stimulation there is marked improvement of the response resulting in a sharp increase in the muscle action potential voltage to many times the base-line.[21] The importance of this syndrome is not its incidence, as in our experience at this hospital it seems to be rare. Rather, if not recognized, prolonged muscle paralysis and apnea during induction of anesthesia (e.g. for tissue diagnosis for SCUC) with neuromuscular blocking agents may occur.

More commonly seen in SCUC are peripheral neuropathies, mononeuropathies, and non-specific myopathies. It has been proved that SCUC produces the previously listed polypeptide hormones, resulting in clinical syndromes in most cases, but the etiology of Eaton-Lambert syndrome and the

TABLE 1

Paraneoplastic Hormones Secreted by Small Cell Lung Carcinoma

ACTH	amylase
corticotropin-releasing factor	renin
MSH	serotonin
gonadotropin	parathormone
ADH	
thyrocalcitonin	

other neuromyopathies is unknown. One would assume that the tumor is also producing a "hormone" which has a neurotoxic effect, but such is yet to be proved.

Origin of Syndromes

Why does this cancer type produce these paraneoplastic syndromes so commonly? Along the basement membranes of normal bronchial mucous glands are found the so-called Kultchitsky cells. These cells stain positively with argentaffin stain and, on electron microscopy, they contain neurosecretory granules.[22] They are identical to the argentaffin cells found in normal intestinal mucosa. Identical neurosecretory granules are found in bronchial carcinoid tumor cells and in SCUC cells, but not in other types of lung cancer. These tumor cells are capable of producing serotonin as is the intestinal argentaffin cell and its malignant counterpart, intestinal carcinoid tumor. Thus, SCUC is considered to be a highly malignant variant of the bronchial carcinoid tumor, and both tumors arise from the Kultchitsky parent cell.[22,23]

Neurosecretory cells are widely distributed in intestinal organs and the bronchi of infants, but are rarely seen in the normal adult bronchus. When smoking and/or occupational irritants stimulate the production of and contribute to malignant change in the neurosecretory cells, the tumor cells retain their pluripotential ability to produce amines and polypeptides from early life, resulting in the hormonal syndromes.

The production of ACTH by SCUC is the most common paraneoplastic syndrome. Doctor Marano has reviewed the WVU Hospital experience with this problem and will now discuss it in detail.

ACTH—Secretion Syndrome

Gary D. Marano, M. D., Medical Intern.

The first case of SCUC and ectopic ACTH-production was reported by Brown in 1928.[24] Liddle first used the term, "ectopic ACTH syndrome," and his work over a period of years delineated the syndrome and included the performance of tumor tissue assays for ACTH.[9] Of the cancers which produce the syndrome, two-thirds are SCUC.

A study of SCUC at WVU Hospital was undertaken to establish the clinical presentation and survival in the group producing this syndrome. A total of 96 cases of SCUC diagnosed from 1965 to 1975 were reviewed for evidence of adrenocorticol hyperfunction. Eight cases showed hyperfunction.

In six cases the presenting symptoms included fatigue, malaise, muscle weakness, confusion, and weight loss. Two patients presented with Cushingoid physical findings, but only one was overt. She also had increased pigmentation, most likely secondary to excess MSH activity. Frequently, multiple hormone production is evident in these patients. The other patient (Case 2) was described as having a "ruddy" complexion.

Hypokalemic alkalosis was found in all eight cases. In six cases, plasma cortisol levels were obtained; four were greater than 100 μg per cent, and the others were between 47 and 84 μg per cent (normal 6 to 28 μg per cent). Elevated blood pressure and glucose intolerance were evident in six cases.

The median survival time from the date of diagnosis of SCUC was only two months. The shortest survival time was only a week after diagnosis in two patients. The patient with the longest survival (six months) did not demonstrate the syndrome until two months before death.

In patients with SCUC the diagnosis of ectopic ACTH production is primarily suggested by hypokalemic alkalosis, progressive weakness, and wasting. Only rarely is Cushing's syndrome apparent. The pathogenesis of the hypokalemic alkalosis has been shown to be the increased cortisol production rather than increased aldosterone production.[25] Our findings are in agreement with a recent report by Imura *et al*[26] in which 30 cancer patients with ectopic ACTH syndrome were reviewed. None of the 17 cases of lung cancer showed Cushingoid features, whereas seven of 13 non-lung cancers did.

Survival after diagnosis is extremely short. Like the patient presented, most are too sick to tolerate chemotherapy. Early recognition of subtle findings and immediate treatment are imperative if better survival is going to be achieved.

Treatment

Doctor Weiss:

The treatment of lung cancer of all types remains a dismal situation in spite of the advances in surgery and postoperative care, radiotherapy, and chemotherapy in the last 20 years. Surgery for most carcinomas remains the best method of initial management, including lung cancer. SCUC, however, is a major exception.

Many large series of SCUC patients have documented the dismal results of surgical resection; a five-year survival of only one to two per cent at best and zero at worst has been repeatedly confirmed for this tumor.[1,2,4,27,28] This poor survival

was particularly apparent in a randomized clinical trial conducted in Britain in which operable SCUC patients underwent either thoracotomy for an attempt at curative resection or high-dose radiation therapy.[28] None of the 71 patients in the surgery group survived more than five years and only three were even alive two years later. Three patients who received radiation were alive and disease-free five and then ten years later; they were cured. This five-year survival is less than the expected mortality for surgery.

The reason for this inability to cure by resection is that SCUC has a rapid tumor-doubling time and a tendency to metastasize very early in its course to the liver, brain, bone marrow, regional lymph nodes and other sites. Very small primary tumors can produce widespread metastases, as was seen in one patient here who presented with extensive liver metastases of SCUC and a normal chest x-ray. At autopsy the pathologist was able to find a 7 mm bronchial tumor which was felt to be the primary lesion, and the rest of the lungs were negative for tumor. SCUC must be regarded as a systemic malignancy at the time of diagnosis.

Chemotherapy

In contrast to the other three major types of lung cancer in which no chemotherapeutic agent causes significant tumor regression and prolongation of survival, there are a number of drugs which have good effect in SCUC. They are cyclophosphamide (Cytoxan), methotrexate, vincristine (Oncovin), doxorubicin (Adriamycin), BCNU and CCNU, epipodophyllotoxin, and hexamethylmelamine. Two drugs, procarbazine (Matulane) and bleomycin (Blenoxane), may have minor activity (Table 2).

Cytoxan is the most active drug. In a study of 144 patients with SCUC conducted by the VA Lung Cancer Study Group, intermittent high doses of Cytoxan or placebo were given to patients in random fashion.[29] Statistically, there was a very significant improvement in the survival of patients treated with IV Cytoxan versus the group given placebo. The median survival of the placebo group was 2.7 months, that of the treated group, five months ($p=0.0005$). In similar studies of oral daily Cytoxan and intermittent nitrogen mustard, no improvement in survival occurred compared to the placebo group.[29]

TABLE 2

Chemotherapeutic Agents Active in Small Cell Lung Carcinoma

cyclophosphamide	epipodophyllotoxin
vincristine	hexamethylmelamine
methotrexate	procarbazine
doxorubicin	bleomycin
BCNU and CCNU	

Animal studies of chemotherapeutic agents have confirmed the value of high, intermittent, maximally-tolerated doses of these drugs which achieve a greater cancer cell-killing effect while allowing time for normal hematopoietic cells to overcome the drug toxicity.

The previously cited study validates the use of intermittent high-dose Cytoxan. Thus, most all treatment programs known to be effective in SCUC utilize this Cytoxan schedule. The usual dose used is 1500-2000 mg/m^2 IV every 3-4 weeks.

Combination Chemotherapy

Although Cytoxan is an effective drug, there also are other drugs which have activity. Since they have different mechanisms of action, they can be used in combination with possible greater activity.

Many combinations have been tried, all of them reported to have significant activity: Cytoxan, vincristine, and methotrexate;[19] bleomycin, Adriamycin, Cytoxan, and vincristine;[30] Cytoxan, vincristine, procarbazine and prednisone;[31] and Cytoxan, Adriamycin, epipodophyllotoxin and methanol extraction residue of BCG.[32] All of them have achieved fairly similar results: 60 to 88 per cent of patients have objective reductions in tumor size, many of them complete remissions (disappearance of all measurable tumor). No one regimen is outstanding in its effectiveness.

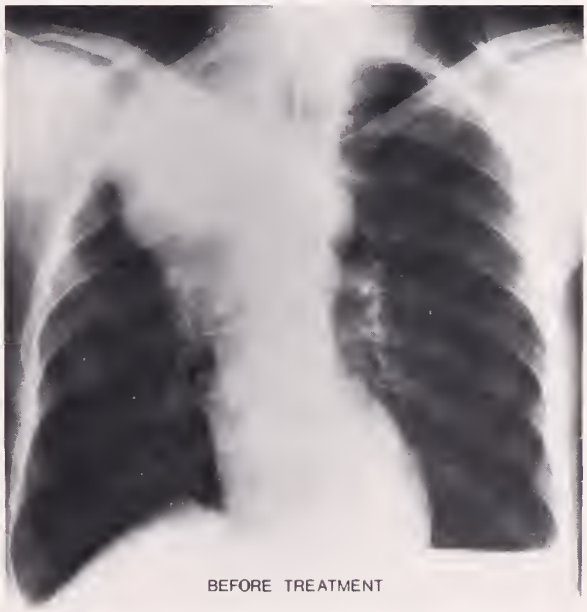


Figure 3. A patient with SCUC before treatment.

Figure 4. The same patient after two months of combination chemotherapy showing the marked reduction in tumor size.

These high percentages of remission and Figures 3 and 4 document the activity of chemotherapy in SCUC.

Combined Modality Treatment

SCUC is also a radiosensitive tumor. The Medical Research Council's study documented that in a few cases even a cure could be achieved by use of radiation therapy alone.[28] Palliative reductions in tumor size that are of short duration are frequently obtained with radiotherapy. If drugs and radiotherapy are each active by themselves, then one would assume that using the two treatment modalities together would be more effective than either one alone. Since relapse after chemotherapy alone commonly occurs in the primary tumor site in the lung,[31,33] use of radiation for treating the bulk of primary tumor while using chemotherapy for treating the systemic metastases would seem to be a reasonable approach. The combined modality treatment approach has been successful, more so than chemotherapy alone or radiotherapy alone in a number of studies.[19,31,34,35]

There has been one study which randomized patients to receive combination chemotherapy versus radiotherapy in which the patients who had chemotherapy seemed to do worse as far as survival was concerned.[33] A major flaw of this study, however, was the type of chemotherapy used: nitrogen mustard, vinblastine (Velban), procarbazine, and prednisolone. All of these drugs are inferior in activity in this disease to Cytoxan, vincristine, and methotrexate. Also, giving steroids to lung cancer patients can even hasten their demise. Thus, the authors' conclusion that radiotherapy is better alone in this disease is suspect.

The CALGB of which WVU is a member has been studying this tumor actively for four years. Our initial protocols utilizing chemotherapy and radiotherapy together have now been completed; I have entered 41 patients in these two studies. Cytoxan alone was compared to Cytoxan, vincristine, and methotrexate on a randomized basis, both groups receiving identical radiation to the lung tumor. In 216 evaluable patients the results of the studies can be summarized as follows:

(1) there was no statistically significant difference in response between using Cytoxan alone versus using the combination for patients with tumor limited to the thorax, but there was a difference in favor of the combination for patients with disseminated tumor; and (2) there was no significant difference in response between two different dose schedules of methotrexate—high-dose and low-dose.

Survival is an important parameter of cancer treatment evaluation; again there was no difference between the regimens.[35] The median duration of survival for each group was nine months with a few patients surviving to two years.

Although these sorts of survival statistics sound poor, one must remember that in the studies cited earlier, the usual median survival was 1.5 to 2 months, at best three months. That means one-half of the patients were dead by 2 to 3 months after diagnosis! This improvement in survival by this aggressive combined modality therapy is best illustrated in Figure 5.

Unfortunately, we still seem to be unable to cure but very few individuals. However, one can compare the improvements in the treatment of SCUC to that of acute myelogenous leukemia; rarely is anybody alive five years after diagnosis, but treatment (if successful in decreasing tumor volume) can result in significantly improved survival compared to no treatment. In the meantime, studies will go on attempting to develop more effective drug regimens and schedules of radiation and chemotherapy. This sort of plodding progress has brought us a long way with many other malignancies in the last 14 years. Hopefully, it will for SCUC also.

Acknowledgement

The editor is grateful for the help of Mrs. Betty Yost of the Tumor Registry and Dr. John Krall of the Department of Community Medicine for their help in the collection and statistical analysis of data for this paper.

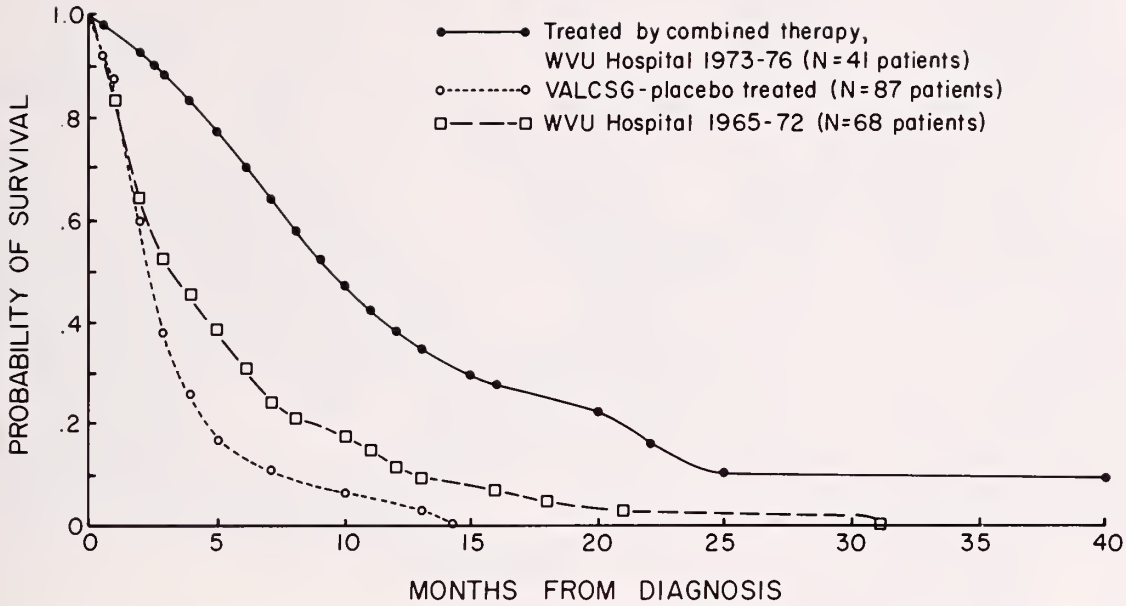


Figure 5. Percentage of patients surviving compared to time in months for three SCUC patient groups: (1) VALCSG: Veterans Administration Lung Cancer Study Group, placebo-treated patients, median survival, 2.7 months;[29] (2) WVU Tumor Registry: patients treated by surgery and/or radiation, 1965-1972, median survival, 3.1 months;[2] and (3) WVU combined modality: patients treated with chemotherapy and radiation by CALGB protocol, median survival, 9.5 months. There was no statistical difference ($p > 0.05$) between the median survivals of the VALCSG and Tumor Registry Groups. The median survival of the combined modality group was significantly better ($p < 0.01$) than either of the other two.

Thanks are also due Carolyn Bailey, R. N., Oncology Nurse Specialist, for her valuable assistance in the care of the protocol patients.

This investigation was supported in part by U. S. Public Health Service Grants CA 07757 and CA 19530-01.

References

1. Watson, W. L., and Berg, J. W.: Oat Cell Lung Cancer. 15:759-768, 1962.
2. Yost, B.: W. Va. University Hospital Tumor Registry.
3. Wynder, E. L., and Berg, J. W.: Cancer of the Lung among Non-Smokers. Special Reference to Histologic Patterns. Cancer. 20:1161-1172, 1967.
4. Kato, Y.; Ferguson, T. B.; Bennett, D. E. *et al*: Oat Cell Carcinoma of the Lung. A Review of 138 Cases. Cancer. 23:517-524, 1969.
5. Saccomanno, G.; Archer, V. E.; Auerbach, O. *et al*: Histologic Types of Lung Cancer among Uranium Miners. Cancer. 27:515-523. 1971.
6. Weiss, W., and Figueroa, W. G.: The Characteristics of Lung Cancer Due to Chloromethyl Ethers (abstract). Am. Coll. of Phys., Philadelphia, April, 1976.
7. Byrd, R. B.; Miller, W. E.; Carr, D. T. *et al*: The Roentgenographic Appearance of Small Cell Carcinoma of the Bronchus. Mayo Clin. Proc. 43:337-341, 1968.
8. Azzopardi, J. G.: Oat Cell Carcinoma of the Bronchus. J. Path. Bact. 78:513-519, 1959.
9. Liddle, G. W.; Nicholson, W. E.; Island, D. P. *et al*: Clinical and Laboratory Studies of Ectopic Hormone Syndromes. Recent Prog. Horm. Res. 25:283-291, 1969.
10. Upton, G. V., and Amatruda, T. T.: Evidence for the Presence of Tumor Peptides with Corticotropin-Releasing-Factor-Like Activity in the Ectopic ACTH Syndrome. N. Engl. J. Med. 285:419-424, 1971.
11. Shimizu, N.; Ogata, E., and Nicholson, W. E.: Studies on the Melanotropic Activity of Human Plasma and Tissues. J. Clin. Endocrinol. Metab. 25:984-990, 1965.
12. Cottrell, J. C.; Becker, K. L.; Matthews, M. J. *et al*: The Histology of Gonadotropin-Secreting Bronchiogenic Carcinoma. Am. J. Clin. Pathol. 52:720-725, 1969.
13. Amatruda, T. T.; Mullow, P. J., and Gallagher, J. C.: Carcinoma of the Lung with Inappropriate Antidiuresis. N. Engl. J. Med. 269:544-549, 1963.
14. Silva, O. L.; Becker, K. L., and Primack, A.: Ectopic Secretion of Calcitonin by Oat-Cell Carcinoma. N. Engl. J. Med. 290:1122-1124, 1974.
15. Hauger-Klevene, J. H.: High Plasma Renin Activity in an Oat Cell Carcinoma: A Renin-Secreting Carcinoma. Cancer. 26:1112-1114, 1970.
16. Ammann, R. W.; Berk, J. E., and Fridhandler, L.: Hyper-Amylasemia with Carcinoma of Lung. Ann. Intern. Med. 78:521-525, 1973.
17. Majcher, S. J.; Lee, E. R.; Reingold, I. M. *et al*: Carcinoid Syndrome in Bronchiogenic Carcinoma. Arch. Inter. Med. 117:57-63, 1966.
18. Bender, R. A., and Hansen, H.: Hypercalcemia in Bronchiogenic Carcinoma. A Prospective Study of 200 Patients. Ann. Intern. Med. 80:205-208, 1974.
19. Eagan, R. T.; Maurer, L. H.; Forcier, R. J. *et al*: Small Cell Carcinoma of the Lung: Staging, Paraneoplastic Syndromes, Treatment, and Survival. Cancer. 33:527-532, 1974.
20. Benson, R. C.; Riggs, B. L.; Pickard, B. M. *et al*: Radioimmunoassay of Parathyroid Hormone in Hypercalcemic Patients with Malignant Disease. Am. J. Med. 56:821-826, 1974.
21. Kennedy, W. R., and Jimenez-Pabon, E.: The Myasthenic Syndrome Associated with Small Cell Carcinoma of the Lung (Eaton-Lambert syndrome). Neurology. 18:757-766, 1968.

22. Hattori, S.; Matsuda, M.; Tateishi, R. *et al*: Oat-Cell Carcinoma of the Lung. Clinical and Morphologic Studies in Relation to its Histogenesis. Cancer. 30:1014-1024, 1972.

23. Bensch, K. G.; Corrin, B.; Pariente, R. *et al*: Oat-Cell Carcinoma of the Lung. Its Origin and Relationship to Bronchial Carcinoid. Cancer. 22:1163-1172, 1968.

24. Brown, W. H.: A Case of Pluriglandular Syndrome. Lancet. ii:1022-1023, 1928.

25. Prunty, F. T. G.; Brooks, R. V.; Dupré, J. *et al*: Adrenocortical Hyperfunction and Potassium Metabolism in Patients with "Non-Endocrine" Tumors and Cushing's Syndrome. J. Clin. Endocrinol. Metab. 23:737-746, 1963.

26. Imura, H.; Matsukura, S., and Yamamoto, H.: Studies on Ectopic ACTH-Producing Tumors. Cancer. 35:1430-1437, 1975.

27. Takita, H.; Brugarolas, A.; Marabella, P. *et al*: Small Cell Carcinoma of the Lung. Clincopathologic Studies. J. Thorac. Cardiovasc. Surg. 66:472-477, 1973.

28. Fox, W., and Scadding, J. G.: MRC Comparative Trial of Surgery and Radiotherapy for Primary Treatment of Small-Celled or Oat-Celled Carcinoma of the Bronchus. Lancet. ii:63-65, 1973.

29. Green, R. A.; Humphrey, E., and Close, H. B.: Alkylating Agents in Bronchiogenic Carcinoma. Am. J. Med. 46:516-525, 1969.

30. Einhorn, L. H.; Fee, W. H., and Farger, M. O.: Improved Chemotherapy for Small-Cell Undifferentiated Lung Cancer. JAMA. 235:1225-1229, 1976.

31. Nixon, D. W.; Carey, R. W.; Suit, H. D. *et al*: Combination Chemotherapy in Oat Cell Carcinoma of the Lung. Cancer. 36:867-872, 1975.

32. Aisner, J.; Esterhay, R. J., and Wiernik, P. H.: Treatment of Oat Cell Carcinoma of the Lung with Cyclophosphamide, Adriamycin, Epipodophyllotoxin VP16-213, and Methanol Extraction Residue (MER) of BCG (abstract). Proc. Am. Soc. Clin. Onc. 16:261, 1976.

33. Laing, A. H.; Berry, R. J., and Newman, C. R.: Treatment of Small-Cell Carcinoma of Bronchus. Lancet. i:129-132, 1975.

34. Bergsagel, D. E.; Jenkin, R. D. T.; Pringle, J. F. *et al*: Lung Cancer: Clinical Trial of Radiotherapy Alone vs. Radiotherapy Plus Cyclophosphamide. Cancer. 30:621-627, 1972.

35. Maurer, L. H.; Glidewell, O., and Holland, J. F.: Minutes of Cancer and Leukemia Group B Meeting, New York, March, 1976.

New Drug Helps Epileptics

An important new drug to help control certain types of epileptic seizures is now available in America. It is clonazepam.

Researchers at Harvard Medical School and at a medical center in Denmark report in two separate articles in a recent issue of *Archives of Neurology*, a scientific journal of the American Medical Association, that clonazepam has proved effective in controlling seizures in some children who had not been helped by earlier drugs.

American doctors were alerted to the new product, recently licensed by the U. S. Food and Drug Administration, in an editorial in April in the *Journal of the American Medical Association* by Hugh H. Hussey, M. D., JAMA Editor Emeritus.

Thomas R. Browne, M. D., Harvard neurologist, reports that clonazepam has proved effective in coping with five types of epileptic seizures. It is rapidly absorbed by the body and passes quickly from the blood to the brain, says Doctor Browne.

The drug sometimes has side effects of drowsiness and behavior changes, which subside with regular use, and may be minimized by lower doses, he says.

Bent Mikkelsen, M. D., and colleagues in Denmark report on trials of the new drug and conclude that it is useful in controlling certain types of seizures.

AMA's Continuing Education Program for Fall

Three final regional meetings and the AMA's Clinical Convention in Philadelphia complete the AMA's 1976 Continuing Medical Education Program offered by AMA's Council on Scientific Assembly and a wide array of medical colleges, schools, medical societies, and associations on both the state and county levels.

Please indicate on the coupon below the site of the meeting that most interests you, return the coupon, and you will receive the detailed program.

- ALL courses are approved for Category 1 C.M.E. credit to help you fulfill your C.M.E. requirements for your AMA Physician's Recognition Award
- Courses in clinical medicine for the practicing physician
- Select courses from a choice of as many as 10 clinical topics in most major specialties
- Course syllabi offered as a text and a reference tool
- Limited course attendance permits active student participation and time to "meet the professor"
- Primarily scheduled on weekends to avoid conflicts with office hours
- Another AMA membership benefit; non-members are welcome but pay an extra fee
- Sites geographically distributed to offer opportunities for physicians to attend, frequently with their entire families
- Students, interns, and residents get 50% discount on course registration fees

Fall C.M.E. Inquiry Form

For specific information on course location, fees, academic program, faculty, and hotels, please check your choice(s), print, and return this to:

AMA Department of Registration Services, 535 N. Dearborn St., Chicago, IL 60610

☐ Jackson Hole, Wyoming	• September 4, 5, 1976
☐ Portsmouth, New Hampshire	• September 10-12, 1976
☐ Milwaukee, Wisconsin	• September 11, 12, 1976
☐ Philadelphia, Pennsylvania	• December 4-7, 1976

Speakers & Leadership Seminar Schedule • In Chicago, Illinois:

____No. 11-Aug. & ____No. 12-Nov.

Name _____ City/State/Zip Code _____

Office Address _____ Office Phone No. ( ) ____-_____

A message from . . .

The President

PHYSICIAN, BE A GOOD CITIZEN!

THIS is my first attempt at writing the President's Page for your Medical Journal, and I am all atremble. It will be difficult to follow the quick wit of Dr. Jack Leckie, and the learned legion of Presidents of past years.

So let me assure you I will not even attempt to emulate the efforts of others; I will be just "myself," and I will try to give you a short message to think about each month.

Remember ancient Egypt and the proposition, "There is nothing new under the sun"? I confess right now that I shall steal, and steal, and steal, and quote from every writer and author I can find. So join me in the hope this experience will be fun.

My message for this month was given to me many years ago by Dr. Karl Weier, when he advised me to be a good physician—*but also to be a good citizen!*

Can you hear me?

JOHN J. MAHOOD, M. D., *President*

THE WEST VIRGINIA MEDICAL JOURNAL

Official Organ of the West Virginia State Medical Association

The Publication Committee is not responsible for the authenticity of opinion or statements made by authors or in communications submitted to this Journal for publication. The author or communicant shall be held entirely responsible.

Published monthly on the first day of the month, at Charleston by the West Virginia State Medical Association. Original articles are accepted on condition that they are contributed exclusively to the Journal. Advertising rates furnished on request.

Address all communications to Business Manager, West Virginia Medical Journal, Box 1031, Charleston, West Virginia 25324. Phone 346-0551.

EDITORIALS

TALMADGE MEDICARE-MEDICAID REFORMS MISS TARGET

Attorney General Edward H. Levi was quoted recently as saying, "We must protect ourselves against a kind of bombardment of demand for instant solutions that keeps us from working things out."

Mr. Levi was talking generally. But a mile from his office, Sen. Herman E. Talmadge has been pressing for just that kind of instant solution to the rising costs of Medicare and Medicaid.

A bill sponsored by him could have an adverse effect on the delivery and quality of care under those programs, without alleviating the costs.

Under the Talmadge bill as introduced, Medicaid fees paid physicians for outpatient care would be not less than 80 per cent of "reasonable" charges under Medicare. This may sound attractive, since Medicaid fees in some states presently are as little as 50 per cent of the Medicare figure. But are Medicare charges fair? And wouldn't the 80-per cent figure make doctors continue to bear the onus for Medicaid cost overruns?

Certainly there should be reasonable efforts to arrest the costs of Medicare/Medicaid. But many of the provisions in the Talmadge measure are a gauntlet "that keeps us from working things out" (to borrow again the words of the Attorney General).

Also under the bill, there would be two assistant secretaries of health handling the programs—including a new one to head a Health Care Financing Administration. This would include an Inspector General with authority to review and audit all health programs covered by the Social Security Act.

Such extra bureaucracy and red tape would in themselves be an expense, without adding appreciably to powers already vested in HEW.

Hospitals all across the country would be classified and categorized, under the Talmadge bill. Reimbursement patterns for Medicare/Medicaid cases would be geared to the average costs of each class of facility—despite the fact that costs largely reflect the caliber of services provided.

Obviously there would be a tendency for hospitals to peg their costs to the average, thus lowering quality.

Besides, hospitals in many states are undergoing fiscal hardships because of present payment levels under Medicare/Medicaid. The Talmadge bill could squeeze some of them to death.

The AMA House of Delegates and Board of Trustees have issued a strong critique of the bill, and Association representatives are testifying on it at hearings this summer.—*Guest Editorial by American Medical Association.*

REGULATORY AGENCIES' POWER SHOULD BE CONTROLLED

Just about every aspect of our lives—and, increasingly, the physician's professional life—is being invaded and pervaded by a government within the Federal government.

In many respects, this inner government enjoys so much autonomy that it stands outside — as well as within — the government as conceived by the Founding Fathers, though officially it is a part of the Executive branch.

We refer to the regulatory agencies, which have been multiplying at the rate of more than one a year over the past decade.

Their power over the people is in inverse relationship to their public accountability. Unlike members of Congress and the President, their leaders are not elected at the polls. Unlike the Federal judiciary, they offer no uniform route of appeal from their decrees.

Although the agency heads are appointed by the President and confirmed by Congress, the actual regulations are likely to be prepared by anonymous civil servants. In addition to being executive arms, the agencies are also powerful legislators and even judges.

Last year, the regulatory logbook—the *Federal Register*—carried 60,221 pages of single spaced fine print, a "gain" of some 14,000 pages over 1974. Those hillocks of paper are virtually as much law as any act of Congress.

The regulations fought by the American Medical Association—the original two sets on Utilization Review, for example, and the Maximum Allowable (Drug) Cost rules—did not just implement law, but created it.

Why have the agencies gained such a vast amount of law-making power?

One reason is that Congress—in its crush of work—enacts loose, pliant legislation that the regulators can mold like putty. Another reason is the Administrative Procedure Act, whose ground rules for the agencies are amenable to being either over-utilized or evaded—whichever suits the fancy and ambition of the regulator.

Over-regulation has been getting plenty of apprehensive attention lately—from the media, the business world, the White House, and also in the Congress that enabled the power to grow as it has. The American Enterprise Institute for Public Policy Research has just announced the establishment of a research center—with a blue-ribbon advisory council—to study government regulation.

But the first general need is to get the Administrative Procedure Act amended, so that the regulators will have to pay more respect to orderly and orthodox government processes and to the regulated.

Bills to strengthen the process of citizen input into new regulations are receiving attention in both houses of Congress. AMA bills are among those receiving consideration. In the House of Representatives, a bill (HR 12048) sponsored by Rep. Walter Flowers of Alabama was ready for floor action in late summer.

Physicians are acutely aware of the impact of unrealistic regulations on the quality of medical care under Federal programs. The Flowers bill and others represent a real hope for improving the regulation-writing process.—*Guest Editorial by American Medical Association.*

HEALTH PLANNING ACT A GIGANTIC DANGER

We physicians can be so absorbed by our day-to-day problems that we overlook a gigantic danger now building up—a danger that could compound many of our problems and create new ones.

It's the Health Planning Act of 1974. This law is not just another governmental abstraction. It's not just a sauced-up rehash of Comprehensive Health Planning, the Regional Medical Program, and so forth.

Quite to the contrary, it's the framework for a bureaucratic totalitarianism that could reshape the health-care system as we know it—including the responsibilities and expandability of hospitals and other facilities and even the rates they charge.

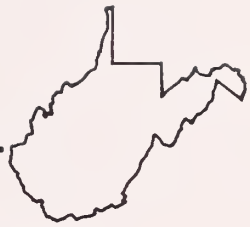
Moves to put doctors' offices and fees within the scope of the act are afoot in the Department of Health, Education, and Welfare, even though the AMA got them excluded from the law.

Certainly there must be planning. And certainly we must avoid costly overbuilding and overstocking of hospitals. Consider some of the ways, however, in which the Health Planning Act would flout the principles of rational planning, be a heavy expense in itself, and imperil the quality of care:

- The Secretary of HEW is to dominate five somewhat overlapping levels of Federal, state and local authority. He is also to issue national health planning policy; appoint a national advisory council; approve state and local planning agencies and the funds they receive, and establish the criteria and procedures they use.

- Certificate-of-need legislation must be adopted in all states, as prescribed by the HEW Secretary. The need for all new institutional facilities and services must be certified; the need for all existent institutional services must be reviewed every five years. Practice-profile data from PSROs, plus the minority status of direct providers of care on local planning boards, could arbitrarily influence the expansion or continuation of services.—*Guest Editorial by American Medical Association.*

GENERAL NEWS



Sports Medicine To Highlight Mid-Winter Conference

A program on sports medicine will be among the highlights of the Tenth Mid-Winter Clinical Conference to be held in Charleston next January 28-30 at the Daniel Boone Hotel.

The annual continuing medical education event is sponsored by the State Medical Association in conjunction with other medical groups and volunteer health agencies.

James R. Hodge, M. D.

The co-chairmen of the Program Committee, Drs. Ralph H. Nestmann and Joseph T. Skaggs, both of Charleston, announced that the sports medicine segment will be held on Friday afternoon (January 28) for physicians and developed as a public program Friday evening.

The emphasis will be on efforts needed to reduce athletic injuries on the junior high and high school levels, and will be oriented to primary care as well as orthopedic physicians. Coaches and trainers will be invited to attend, and also participate in, both the physician and public sessions.

Points of discussion are expected to include the need for proper physical examinations, the use and mis-use of drugs for athletes, and treatment of specific athletic injuries.

The co-chairmen also announced that other general subject areas for the mid-winter conference tentatively will include medical and surgical management of gastrointestinal bleeding, acute thoracic problems, tomography and psychiatry.

Among those physicians who have accepted invitations to speak is Dr. James R. Hodge, Akron (Ohio) psychiatrist, who is scheduled for Sunday morning (January 30).

The traditional Saturday-night dinner dance of the Kanawha Medical Society which has coincided with the mid-winter conference in previous years has been scheduled for another date next January; therefore the Program Committee is planning a dinner and speaker on that evening (January 29) during the tenth conference for participants and guests.

James R. Hodge, M. D.

Doctor Hodge, who has been in the private practice of psychiatry in Akron since 1956, is a lecturer in the Department of Psychology at Akron University and Chief of Psychiatry at Akron City Hospital. The author of *Practical Psychiatry for the Primary Physician*, published in 1975, Doctor Hodge received an award from the Ohio Psychiatric Service for outstanding service for psychiatry in May of this year.

Certified in psychiatry by the American Board of Psychiatry and Neurology in 1957, he is a member of the Executive Steering Committee of the Board of Directors, Ohio Academy of Family Physicians-Continuing Education in Psychiatry Project.

Doctor Hodge received his M. D. degree in 1950 from Jefferson Medical College in Philadelphia and interned at the U. S. Navy Hospital in St. Albans, New York. He studied psychiatry at the Menninger School of Psychiatry in Topeka, Kansas, and the University Hospitals of Cleveland.

He is a Diplomate of the American Board of Medical Hypnosis and a Fellow of the American Psychiatric Association, the American Society of Clinical Hypnosis, and the Academy of Psychosomatic Medicine. He is a member of the American College of Psychiatrists.

Doctor Hodge is a feature writer for *Medical Times*, and served as Consultant for the Greater Akron Pastoral Counseling Center from 1964 to 1973. He is the author of more than 50 scientific articles.

The conference will begin Friday afternoon and conclude at noon on Sunday.

Serving on the Program Committee with Doctors Nestmann and Skaggs are Drs. William O. McMillan, Jr., of Charleston, and C. Carl Tully of South Charleston.

Additional details, including other conference speakers, will be provided in later issues of *The Journal* as the program is completed.

Huntington Urology Seminar Program Announced

The program has been announced for the Seminar on Urinary Tract Infections to be held on Saturday, October 16, in Huntington at the Downtown Holiday Inn. The sponsors will be Saint Mary's Hospital and the Marshall University School of Medicine.

The seminar will begin with registration at 8 A.M. and continue through 12:30 P.M., followed by

an optional buffet luncheon and attendance at the Marshall homecoming game.

The speakers and their topics will be:

"Medical Approach to Urinary Tract Infections"—Maurice R. Mufson, M. D., Chief of Medicine, Marshall University School of Medicine; "Surgical Approach to Urinary Tract Infections"—Victor A. Politano, M. D., Chief, Division of Urology, Jackson Memorial Hospital, Miami, Florida; "Gram Negative Sepsis"—Doctor Mufson;

"Electrical Stimulation of the Urinary Bladder"—Stanley J. Kandzari, M. D., Associate Professor, Division of Urology, West Virginia University Medical Center, Morgantown; "Ureterovesical Reflux"—Doctor Politano; and "Calculus Disease of the Urinary Tract"—Doctor Kandzari.

Dr. Rafael E. Molina, Huntington urologist, will be the Program Director.

For registration, CME credit and other information, contact Saint Mary's Hospital, Department of Continuing Medical Education, 2900 First Avenue, Huntington 25701; phone 304/696-2298 (see also July or August issue of the *Journal*).

Association Co-Sponsor For Medical Staff Conference In October

The Second Annual Maryland Medical Staff Conference will be conducted by the Maryland Hospital Education Institute October 6-9 at The Greenbrier in White Sulphur Springs.

The founding sponsors of the conference are the University of Maryland Medical School, the Maryland Hospital Association, and the Medical & Chirurgical Faculty of Maryland.

Co-sponsors will include the West Virginia State Medical Association, the Medical Societies of the District of Columbia and Virginia, the West Virginia Hospital Association, and the Hospital Council of the National Capital Area. The conference will be held in cooperation with the Virginia Hospital Association.

This year's conference will focus on "Hospital Leadership: Organizing for Accountability for Solving the Tough Problems." The program is designed to allow hospital leaders (1) to reinforce (or initiate) a hospital teamwork approach to the management of quality medical care; (2) to learn appropriate methods for identifying and selecting effective chiefs of service, trustees and administrators; (3) to learn appropriate methods for recognizing and separating dysfunctional chiefs of service, trustees and administrators; (4) to learn approaches for dealing with conflicting priorities for hospital action that emerge from the hospital, its community, and the state regulators; and (5) to investigate new methods of hospitalwide quality assurance and liability control beyond medical audit.

The faculty will include:

Charles Edwards, M. D., Senior Vice President and a Director, Becton-Dickinson Company, formerly Assistant Secretary for Health, U. S. Department of Health, Education and Welfare; Robert Evans, M. D., Sloan Fellow at M.I.T.; formerly Dean, Rockford (Ill.) Medical School, and Medical Director at York Hospital; David L. Everhart, President, Northwestern Memorial Hospital, Chicago;

William R. Fifer, M. D., Director, Regional Medical Education Center, Veterans Administration, and consultant to Quality Review Center, J.C.A.H.; Russell Roth, M. D., practicing urologist and former President of the American Medical Association; and Nathan Stark, Vice Chancellor for Health Affairs, University of Pittsburgh, and a long-time hospital trustee.

For registration and additional information, contact: Maryland Hospital Education Institute, 1301 York Road, Lutherville, Maryland 21093 (telephone 301/321-6200).

Convention Story Will Appear In October Journal

The 109th Annual Meeting of the West Virginia State Medical Association was being held at The Greenbrier in White Sulphur Springs as this issue of *The Journal* went to press.

The full convention story, including information concerning new officers of both the State Medical Association and Auxiliary, as well as heads of sections and affiliated societies and associations, will be carried in the October issue.

Wheeling Clinic Completes Plans For Seminar In October

"Update '76," a two-day scientific seminar in medicine and surgery, will be held by the Wheeling Clinic on October 8 and 9 at Oglebay Park in Wheeling. There will be discussion in a wide range of medical disciplines, with lectures presented by staff members of the Wheeling Clinic and guest speakers.

The formal program will open on Friday, October 8, with a luncheon beginning at 11:30 A.M. The luncheon speaker will be John W. Traubert, M. D., Chairman of the Department of Family Practice at the West Virginia University School of Medicine. His topic will be "Family Practice Update—Where Are We Headed?"

The general session will be called to order at 1 P.M. by Rizal V. Pangilinan, M. D., Chairman of the Education Committee, Wheeling Clinic. Albert L. Wanner, M. D., of the clinic's Department of Neurology, Psychiatry and Psychology, will be the moderator.

John W. Traubert, M. D.

Frank J. Ayd, Jr., M. D.

The speakers and their topics will be Frank J. Ayd, Jr., M. D., Director of Professional Education and Research, Taylor Manor Hospital, Baltimore, "Is It Anxiety or Depression?;" John H. Scott, M. D., Medical Director, School of Respiratory Therapy, West Penn and Mercy hospitals, Pittsburgh, "Pulmonary Thromboembolism—Current Aspects;" and Bruce J. Walz, M. D., Assistant Professor of Radiology, Division of Radiation Oncology, Washington University, St. Louis, Missouri, "Adjuvant and Definitive Radiation Therapy in Cancer of the Upper Air and Food Passages."

These presentations will be followed by a panel discussion, with the panelists to include Doctors Ayd, Scott, Walz, Wanner, and Daniel W. Dickinson, M. D., Department of Thoracic Surgery, Wheeling Clinic.

Workshops will be held from 3 to 4 P.M. These will include Psychiatry-Neurology, Doctors Ayd and Wanner, and Henry L. Kettler, M. D., Department of Neurology, Psychiatry and Psychology, Wheeling Clinic; Dermatology, Drs. K. William Waterson, Jr., and Sheldon Widlan, Department of Dermatology, Wheeling Clinic, and Doctor Walz; and Thoracic Medicine and Surgery, Doctors Scott and Dickinson.

A Symposium on Hypertension will begin at 4 P.M., with Albert M. Valentine, M. D., Department of Medicine, Cardiology, Wheeling Clinic, serving as moderator. The speakers will be Drs. David T. Lowenthal, Associate Professor of Clinical Pharmacology and Director of Clinical Pharmacology Units, Hahnemann Medical College and Hospital, Philadelphia; and James R. Oster, Assistant Professor of Medicine, University of Miami (Fla.) School of Medicine.

David T. Lowenthal, M. D.

Richard C. Bozian, M. D.

The scientific program will begin on Saturday at 8 A.M. with a panel on "The Crucial Second Step in the Management of Hypertension." Doctor Valentine will be moderator and serve as a panelist with Doctor Oster.

Edward C. Voss, M. D., Department of General Surgery, Wheeling Clinic, will be moderator for the general session begining at 9 A.M.

The speakers and their topics will be Drs. Richard C. Bozian, Professor of Medicine and Director, Division of Nutrition, University of Cincinnati College of Medicine, "Are We Starving Our Hospital Patients?;" Theodore M. King, M. D., Ph. D., Professor and Director, Obstetrics and Gynecology, Johns Hopkins Hospital, Baltimore, "Estrogen Controversy in Birth Control and in the Post-Menopausal;" and William N. Spellacy, M. D., Professor and Chairman, Department of Obstetrics and Gynecology, University of Florida College of Medicine, Gainesville, "Current Concepts of Oral Contraceptive Treatment."

Theodore M. King, M. D.

A. G. DiBartolomeo, M. D.

Serving as panelists for questions will be Doctors Bozian, King, Spellacy, and Drs. Terry A. Athari, Robert T. Brandfass, James W. Campbell and Robert W. Leibold, all of the Wheeling Clinic. The same physicians, with the exception of Doctor Bozian, will participate in a following workshop in obstetrics and gynecology to begin at 10:45 A.M.

Joining in a workshop in surgery beginning at the same time will be Doctors Bozian and Voss, and Dr. John O. Rankin, Departments of Surgery and Orthopedic Surgery, Wheeling Clinic.

"An Afternoon with Internal Medicine" will be conducted from 1 to 4 P.M., with the moderator to be Charles L. Beall, M. D., Department of Internal Medicine, Hematology, Wheeling Clinic. The speakers and their topics will include:

Burt R. Meyers, M. D., Associate Professor of Medicine, Mt. Sinai School of Medicine, New York, "Update Antibiotics;" Thomas E. Chvasta, M. D.,

Department of Internal Medicine, Gastroenterology, Wheeling Clinic, "Newer Concepts of Viral Hepatitis;"

Anthony G. DiBartolomeo, M. D., Assistant Professor of Medicine and Chairman, Division of Rheumatology, WVU Medical Center, "Rheumatoid Variants—A Common Diagnostic Problem;" Byron L. VanPelt, M. D., Department of Internal Medicine, Wheeling Clinic, "Tuberculosis Chemotherapy;" Carlos A. Vasquez, M. D., Medical Oncology and Hematology, Department of Internal Medicine, Wheeling Clinic, "Breast Cancer;" and Doctor Beall, "Drug Induced Blood Disorders."

The Fulton Memorial Lecture will be delivered at 4:15 P.M. by Doctor Rankin.

David Brinkley, NBC news analyst and anchor man, will be the special guest speaker for the Saturday evening dinner session.

Registration will be held from 5 to 9 P.M. on Thursday, October 7, and will continue on both Friday and Saturday beginning at 8 A.M.

The seminar has been approved for credit in Category 1 of the Physician's Recognition Award of the American Medical Association—and for 12 hours of prescribed credit by the American Academy of Family Physicians.

A registration fee of $50 for the entire conference will be charged all registrants, and will include admission to luncheons, evening entertainment and dinners for the registrants and their wives on Friday and Saturday.

The West Virginia State Medical Association's leadership had an opportunity to renew acquaintances with a number of long-time friends and colleagues during the American Medical Association's Annual Meeting in Dallas in late June. Pictured above, from left to right, are Dr. John J. Mahood, who assumed the State Association Presidency in August; Dr. Wesley W. Hall of Reno, Nevada, former AMA President; Dr. Jack Leckie of Huntington, Immediate Past President of the State Association and current Chairman of the Council; and Dr. Richard E. Flood of Weirton, one of the State Association's two Delegates to the AMA and himself also a former President of the Association.

State EMS Hospital Categorization Prototype Under Way

Categorization of hospital emergency capabilities is being carried out in northcentral West Virginia through efforts of Regions VI and VII of the Emergency Medical Service System.

Their locally designed program is designed to maintain the philosophy of assessment of capabilities in the critical care patient areas.

In order to assist EMS Systems development involving facilities designation and inter-facilities arrangement, the Federal EMS office has identified the following critical patient groups: trauma (multiple, burn), acute cardiac care, poisonings, high-risk infants, drug detoxification and overdose, and psychiatric.

The goals of categorization in Regions VI and VII, as outlined by their Task Force on Categorization, include providing information as to the proper facility most capable of managing a particular patient, providing a means of identifying the critical patient, and the needs of a facility in order to provide the advanced life support required.

This information can give ambulance service a concise evaluation of the various medical care levels available and the distances involved in transporting patients.

Team of Area Physicians

Hospital categorization protocols were developed by a team of area physicians who utilized the Nebraska Categorization Model as a reference point. The Task Force reviewed results of demographic and hospital data collected by the EMS staff through questionnaires and assessment forms sent to each facility.

Sandoz Another Contributor To Annual Meeting

Sandoz Pharmaceuticals of East Hanover, New Jersey, was a late contributor to support for the State Medical Association's Scientific program at The Greenbrier in August.

The Sandoz grant was received after the official program for the Convention had gone to press, but it was called to the particular attention of Association officers, the Council and the House of Delegates during the meeting.

Sandoz has devoted major efforts in recent years to an education program which has included specific efforts to develop journalistic skills among physicians and others on staffs of more than 200 medical publications. That work has included workshops, a newsletter and other techniques designed to meet needs and interests of journal editors and staff.

A major obstacle encountered was how to evaluate objectively the available medical resources in the area in terms of personnel and physical plant.

The Task Force decided that the best method was by categorization of emergency care capabilities in seven separate divisions so that each hospital would be evaluated in relationship to its capabilities.

Accordingly, specific criteria were established in each of the categories that would allow a further delineation of each hospital into a level of care designated basic, intermediate or advanced.

Independent site visit surveyor teams composed of physicians, nurses and allied health personnel were completed in late July.

Pilot For Entire State

The efforts of the Regions VI and VII EMS project serve as a prototype for statewide categorization, currently being examined by a Joint Committee of the West Virginia Hospital Association and the State Medical Association.

Members of the EMS Task Force included: Dr. E. F. Hyde, Jr., Fairmont (Chairman); Dr. Joseph A. Noronha, Elkins; Dr. John V. Brannon, Clarksburg; Dr. John V. Rick, WVU Medical Center; Dr. Walter H. Moran, Jr., WVU Medical Center; Emil Baldwin, Stonewall Jackson Hospital, Weston; H. Sue Mullenex, R. N., Morgantown; Marjorie Rupert, R. N., Weston; Thomas Paden, Davis Memorial Hospital, Elkins; Dr. Rigoberto Ramirez, Buckhannon; and Dr. Jacob Jacob and Robert Katana, Fairmont Clinic.

The Region VI and VII EMS System is a federally funded program charged with coordinating all aspects of emergency care in 13 counties in north-central West Virginia.

The EMS System is the only operational project in the State funded under section 1203 of the PHS Act, Title XII (Pl 93-154). D. M. LaFauci of Fairmont is the Project Director, and Raymond Alvarez, Fairmont, is the Coordinator for the categorization program.

Dr. Frank J. Holroyd (right) of Princeton, one of West Virginia's two Delegates to the American Medical Association, chats with Dr. Richard E. Palmer and Mrs. Palmer of Alexandria, Virginia, after Doctor Palmer's inauguration as President of the AMA during the national organization's annual meeting in Dallas in late June.

State Heart Association Meeting Sept. 17-19 At Pipestem

The 1976 annual meeting and scientific sessions of the American Heart Association, West Virginia Affiliate, Inc., will be held September 17-19 at Pipestem State Park.

On Friday, September 17, State committee meetings will be held from 2 to 4 P.M.; the General Assembly meeting, from 4 to 5:30 P.M.; and the General Assembly and Awards Banquet, at 7 P.M.

Louis Rakita, M. D.

Scientific and non-medical sessions will be held concurrently on Saturday beginning at 9 A.M.

Dr. Howard B. Sauder of Wheeling, President, will be moderator for the scientific session. Dr. Louis Rakita of Cleveland, Ohio, will make two presentations, "Complex Arrhythmias in the Coronary Care Unit" and "Conduction Abnormalities in the Coronary Care Unit," followed by a talk on "Stress Testing in the Diagnosis of Coronary Artery Disease" by Dr. Allen F. Bowyer, Professor of Medicine at the West Virginia University School of Medicine.

Speaking at the non-medical session will be Drs. Alton Ochsner, Jr., of Metairie, Louisiana, and John E. Mazuzan, Jr., of Burlington, Vermont.

Doctor Mazuzan also will speak at the Saturday luncheon for the entire group. The remaining activities on Saturday will include a return to the combined lay and medical session, board orientation and meeting, social hour and board dinner.

Doctor Ochsner will be the speaker for the Friday evening banquet.

Doctor Sauder will preside at the General Assembly on Friday and present the keynote address.

Participating in the combined medical and lay session on Saturday will be Dr. Margaret J. Albrink, Professor of Medicine, WVU, who will discuss "Diet in the Prevention and Treatment of Coronary Artery Disease;" Doctor Bowyer, whose topic will be "Exercise in the Prevention and Treatment of Coronary Artery Disease;" and a panel for questions and answers composed of Doctors Rakita, Bowyer, Albrink and Sauder.

Five hours of credit in Category 1 has been applied for from the West Virginia Chapter of the

American Academy of Family Physicians for the scientific session.

A special education program and workshop for nurses on "Arrhythmias, Artifacts and Conduction Abnormalities" will be conducted by Doctor Rakita on Sunday morning. The election of new officers, and State committee meetings, also on Sunday morning, will conclude the annual meeting.

There will be no registration fee for the annual meeting and scientific sessions. Charges for tickets for scheduled luncheons and dinners will be $7 for Friday's membership banquet; $3.25, Saturday luncheon; and $6.25, Saturday evening Board of Directors' cook out.

For additional information, contact the West Virginia Heart Association, 211 35th Street, S.E., Charleston 25304 (phone 346-5381).

Dr. Robert W. Coon Named Dean Of MU Medical School

Marshall University has named Dr. Robert W. Coon as Dean of its Medical School and Vice President for Health Services. The announcement was made recently by Dr. Robert B. Hayes, Marshall President.

Doctor Coon, who has assumed his new duties, relinquished his post of Vice Chancellor for Health Education for the West Virginia Board of Regents in Charleston.

Robert W. Coon, M. D.

At the time the appointment was announced, President Hayes called Doctor Coon "the best qualified man" and said he was "tremendously pleased" he had accepted the post.

"He is totally familiar with the program and we will not lose a single day's time in its development," President Hayes said, pointing out that Doctor Coon had been Acting Dean of the medical school since Dr. Robert C. Partlett resigned in January.

"I believe the approach toward developing community-based medical schools is sorely needed in this country," Doctor Coon said, "and one of the few remaining opportunities to do this is here at Marshall."

He alluded to "a tremendous potential at Marshall and in southern West Virginia for the development of a high quality, community-based medical school."

A native of Montana, Doctor Coon was appointed to the Board of Regents position late in 1975. He received his M. D. degree from the University of Rochester and has served as attending pathologist and professor at several hospitals and universities, including New York's Presbyterian Hospital, and Columbia, Vermont and Maine Universities.

He is a Diplomate of the American Board of Pathology and served as the Board's President in 1972. He was Director of the Northern New England Regional Medical Program in 1967-68.

Hal Wanger Family Practice Conference Sept. 16-17

The Second Annual Hal Wanger Family Practice Conference will be held September 16 and 17 in the West Virginia University School of Medicine Auditorium.

The conference will begin with registration at 8:55 A.M. on Thursday, September 16, followed by welcoming remarks by John E. Jones, M. D., Dean of the WVU School of Medicine.

The speakers and their topics on Thursday will include:

"Childhood Anemia"—Barbara Jones, M. D., Professor of Pediatrics; "Diagnosis and Management of Stokes-Adams Syndrome"—A. C. Jain, M. D., Associate Professor of Medicine; "Rational Use of Antibiotics"—Robert H. Waldman, M. D., Professor and Chairman, Department of Medicine;

"Newer Regimens in Ketoacidosis Management"—Philip J. Peters, M. D., Fellow in Endocrinology; "Recognizing and Managing the High-Risk Pregnancy"—David J. S. Hunter, M. D., Associate Professor, Obstetrics and Gynecology; and "Office Allergy Screening" (workshop)—John W. Traubert, M. D., Professor and Chairman, Department of Family Practice.

On Friday, registration will continue, beginning at 8 A.M., with the scientific program to begin at 9 A.M. The speakers and their topics will be:

"V. D. Update"—Roland J. Weisser, Jr., M. D., Assistant Professor, Department of Family Practice; "The Child with a Limp"—Robert N. Clark, M. D., Professor and Chairman, Department of Orthopedic Surgery; "Problems with Compliance"—C. Wayne Weart, Pharm. D., Assistant Professor, Departments of Pharmacy and Family Practice;

"Hand Injuries—Acute Management"—Lawrance S. Miller, M. D., Clinical Professor, Department of Orthopedic Surgery; "Evaluation and Management of Low Back Pain"—Charles M. Davis, Jr., M. D., Associate Professor, Department of Orthopedic Surgery; and "Management of Peripheral Vascular Disease"—Alfred D. Ghaphery, M. D., Clinical Associate Professor of Surgery.

The program is acceptable for 12 hours of Prescribed credit by the American Academy of Family Physicians.

New Class Of 88 Students Enters WVU Medical School

A first-year class composed of 86 West Virginians and two residents of other states entered the West Virginia University School of Medicine when the first semester began on August 25.

Continuing the gradual expansion of class size, the 88 entering students represent an increase of four over last year's class.

The 12 women and 76 men were selected from 224 applicants who were interviewed by the 12-member Committee on Admissions. More than 1,000 inquiries were received and acknowledged. Applications were sent to 205 West Virginians, 211 residents of other states and five foreign students seeking admission.

Interviews were granted to 193 West Virginians and 31 non-residents.

The 86 West Virginians come from 23 counties in the State. Kanawha County is home for the largest number—19. Monongalia County has nine and Cabell, eight.

Those admitted completed their undergraduate education at 31 different institutions—38 were students at WVU, 10 at Marshall University and 11 attended state colleges. Twenty-nine students attended schools outside West Virginia—four at Duke University, two each at Emory University, the University of Kentucky and the University of Tennessee, and one at each of 19 other institutions.

Grade point average for the accepted candidates this year was 3.49 (4.0 is perfect—all A's) with a science average of 3.54.

Members of the class include:

BARBOUR COUNTY: Philippi—Charles David Guy.

BERKELEY COUNTY: Martinsburg—Michael Warren Burkhart, Donald Ray Lilly and James Kennedy Porterfield.

BOONE COUNTY: Madison—Laura Frances Bragg.

BRAXTON COUNTY: Gassaway—Howard Montgomery Rigg III.

BROOKE COUNTY: Wellsburg—Jeffrey Steven Moncman.

CABELL COUNTY: Huntington—Christopher Edward Byard, Michael Francis Godschalk, Alter Joseph Herbert, Mari Lynn Lilly, Steven Arnett Lovejoy, W. Joseph Plymale and Robert Ray Whitten, Jr. Milton—Richard Camp Wisman.

GRANT COUNTY: Petersburg—Mary Christine Maxwell.

GREENBRIER COUNTY: Alderson—Michael Ross Simmons. Lewisburg—Rita Winton Morris and Robert Arleigh Shirey.

HANCOCK COUNTY: Weirton—Dennis Wayne Allen and Richard Anthony Capito.

HARRISON COUNTY: Bridgeport—John Michael Holbert. Nutter Fort—John David England. Salem—Leeman Phillips Maxwell and John Dement Muldoon.

JACKSON COUNTY: Ripley—Michael Howard Chancey.

JEFFERSON COUNTY: Charles Town—Carl Rollynn Sullivan and Eric Dwight Waggy.

KANAWHA COUNTY: Charleston—James White Caudill, John Edward Davis, David Maxwell Gray, Jeffery Auriel Kugel, Bernard Joseph Luby, Robert Bennis McBride, Daniel Franklin Miller, Robert David Rubin, Bruce Alan Tassan. East Bank—Harold Thomas Reynolds. Elkview—Michael Wayne Jopling. Glasgow—John Anthony White. St. Albans—Joan Mary Garska, Eric Martin Humphreys, Rex David Lasure and John Patrick Neal. South Charleston—Haywood Gordon France, Jr., Jane Claire Gerke and Terry Dean Koubek.

LOGAN COUNTY: Chapmanville—Thomas Ervin Davis, Jr. Logan—David Emmit Allie.

MARION COUNTY: Fairmont—Bruce Philip Guido, Gwynne Anne Marstiller, David Andrew Pitrolo and Glenn Russell Snider, Jr.

MASON COUNTY: Pt. Pleasant—Stephan Douglas Hanna.

McDOWELL COUNTY: Keystone—Fred Shaune Robertson.

MINGO COUNTY: Gilbert—Randal Earl White. Williamson—Richard David Layne and Jeffrey Lynn Stambough.

MONONGALIA COUNTY: Morgantown—James Edward Burgess, Carl David Burkland, William Fiore Coppula, Roger Allen Lewis, Donna Susan Lilly, Eugene William St. Clair, Michael Eugene Taylor and Mark Graham Wertman. Westover—Stanley Tyler Day.

NICHOLAS COUNTY: Richwood—William David Cutlip. Summersville—David Alan Henderson.

OHIO COUNTY: Triadelphia—Jane Wyant Riester. Wheeling—Dennis Richard Niess and Janice Claire Sobray.

PENDLETON COUNTY: Franklin—John Robert Marler.

RALEIGH COUNTY: Beckley—James Louis Comerci, Daniel Phillip Harrington and Marc Alan Swanson.

SUMMERS COUNTY: Hinton—Barbara Aileen Cooper.

TYLER COUNTY: Paden City—Raymond Bruce Henthorn.

WETZEL COUNTY: New Martinsville—Samuel David Morris.

WOOD COUNTY: Parkersburg—Richard Mark Allman, Richard Lee Davis, Thomas Alan Durnell, Sharon Ruth Lehman and Donza Thomas Worden II. Washington—Tony Rex Zerbe.

WYOMING COUNTY: Mullens—Daniel H. Stewart.

OUT-OF-STATE students admitted were:

MASSACHUSETTS: Roxbury — Michael John Taymor.

OHIO: Athens—Stephen Thomas Hill.

Continuing Education Activities

Here are the continuing medical education activities listed primarily by the West Virginia University School of Medicine for part of 1976, as compiled by Dr. N. LeRoy Lapp, Assistant Dean for Continuing Education. The schedule is presented as a convenience for physicians in planning their continuing education program. (Other national, state and district medical meetings are listed in the *Medical Meetings* Department of *The Journal.*)

The program is tentative and subject to change. It should be noted that weekly conferences also are held on the Charleston and Wheeling campuses as well as in Morgantown. Further information about these may be obtained from: Division of Continuing Education, WVU Medical Center, P. O. Box 2867, Charleston 25330; Office of Continuing Medical Education, WVU Medical Center, Morgantown 26506; or, Office of Continuing Medical Education, Wheeling Division, WVU School of Medicine, Ohio Valley Medical Center, 2000 Eoff Street, Wheeling 26003.

Sept. 23	Pediatric Day	Wheeling
Sept. 26-Oct. 2	Family Practice Review	Lexington, Ky.
Oct. 1, 2	Cardiology Teaching Day	Morgantown
Oct. 1, 2	Neurosciences Teaching Day	Morgantown
Oct. 15	Seminar in Medicine in Honor of Edmund B. Flink	Morgantown
Oct. 17-23	Family Practice Review	Lexington, Ky.
Oct. 22, 23	W. Va. Chapter, American College of Surgeons, and Dept. of Surgery, Continuing Education Program	Morgantown
Oct. 30	Critical Care Medicine	Morgantown
Oct. 29, 30	Recent Advances in Clinical Pathological Chemistry—Automation, How Much?	Morgantown
Nov. 4	Family Practice Day	Wheeling
Nov. 13	Cardiology for the Primary Care Physician	Charleston

Medical Meetings

Sept. 9-11—Am. Assn. of Obstetricians & Gynecologists, Hot Springs, Va.

Sept. 15-17—Pa. Medical Society, Philadelphia.

Sept. 16-17—Hal Wanger Family Practice Conference, Morgantown.

Sept. 16-18—Medical & Chirurgical Faculty of the State of Md., Annapolis.

Sept. 17-19—State Heart Assn., Pipestem.

Sept. 23—Pediatric Day (Wheeling Div., WVU), Wheeling.

Sept. 20-23—AAFP, Boston.

Sept. 21-24—Am. Roentgen Ray Society, Washington, D. C.

Sept. 26-30—Kentucky Med. Assn., Louisville.

Oct. 6-9—Maryland Medical Staff Conference, White Sulphur Springs.

Oct. 6-10—Am. Academy of Ophthal. & Otolaryn., Las Vegas.

Oct. 8-9—Update '76 (Wheeling Clinic), Wheeling.

Oct. 9-14—Indiana State Medical Assn., Indianapolis.

Oct. 11-15—ACS, Chicago.

Oct. 11-16—Am. College of Emergency Physicians, New Orleans.

Oct. 12-14—Am. College of Emergency Physicians, New Orleans.

Oct. 16—Seminar on Urinary Tract Infections, Huntington.

Oct. 16-17—Am. College of International Physicians, Inc., Chicago.

Oct. 16-21—Am. Academy of Pediatrics, Chicago.

Oct. 17-18—Am. College of Preventive Medicine, Miami Beach.

Oct. 24-26—Medical Society of the District of Columbia, White Sulphur Springs.

Oct. 24-28—Am. College of Chest Physicians, Atlanta.

Nov. 3-6—Am. Society of Cytology, Houston.

Nov. 4-7—Medical Society of Virginia, Williamsburg.

Nov. 7-10—Southern Medical Assn., New Orleans.

Nov. 15-19—Am. Heart Assn., Miami Beach.

Dec. 4-8—AMA Clinical, Philadelphia.

Dec. 5-9—Am. Academy of Dermatology, Chicago.

1977

Jan. 28-30—Tenth Mid-Winter Clinical Conference, Charleston.

The West Virginia Medical Journal

Vol. 72, No. 10 October, 1976

Presidential Address*

Jack Leckie, M. D.

It is with genuine pleasure, though clouded with mixed emotions, that I address you today. As always, I repeat that my forte has been sincerity and brevity. Today, I will be more sincere than brief—so just relax—for this benchmark occasion of my life.

At this time, allow me to re-introduce by best critic, traveling companion and admirer. She is best remembered in our travels around the state for her graciousness and for saying many, many times at each meeting, "Hello there, I'm Barbara Leckie"—my good wife, Barbara. Number two critic and well wisher sitting next to Barbara is my number one son, Steve.

It was my pleasure to address nineteen component societies in West Virginia this year, and medical organizations in five surrounding states. I shall cherish these visitations forever.

To be available for travel and other association duties meant coverage by my associates. They were unselfish in this regard, and I sincerely thank them, one and all, at this time. They include Doctors Eliseo de los Santos, William Walker, Willard F. Daniels, Jr., John H. Spencer and William R. Turner. I appreciate their efforts.

So much for the amenities. Now back to medicine and its trouble-laden present and future. At the national scene, medicine is not alone with trouble—we have much company, including our political leaders. Within the span of a few years, a President was forced to resign, a Vice President resigned in disgrace, a lawmaker was disciplined and humiliated for only taking a midnight swim, another member of Congress was disdained publicly for not swimming enough, and even other

The Author

- **Jack Leckie, M. D., Immediate Past President, West Virginia State Medical Association; and Director of Emergency Services, St. Mary's Hospital, Huntington.**

Jack Leckie, M. D.

*Presented at the second and final session of the House of Delegates, 109th Annual Meeting of the West Virginia State Medical Association, The Greenbrier, White Sulphur Springs, W. Va., Saturday, August 21, 1976.

Congressmen were chastised for employing incompetent secretarial help for duties considered most unusual and base.

These are harsh words, but no more crass than the barbs thrown at organized medicine at many Congressional hearings—many of which are distorted, malicious, capricious, and self-effacing. I refer to the current "Senseless Surgery" report of the National Observer which has received national and Congressional attention; to the Federal Trade Commission for questioning the Code of Ethics of the American Medical Association; and the allegations that the AMA is a monopoly.

Our Congressional leaders have been aided and abetted by the fourth estate, which repeatedly demonstrates brazen irresponsibility in its single-minded purpose to produce headlines. The results of the New York Times reporting under headlines, "Incompetent Surgery Is Found Not Isolated," are not yet clear nor complete. The "Blues," that is Blue Cross and Blue Shield, bow to the wind in their move to pay for one or even two consultations when a patient desires such before submitting for surgery. These things might illustrate the success of the media's campaign to undermine confidence in the medical profession. The AMA has responded vigorously to this class of reporting.

Sir William Osler once wrote, "Believe nothing that you see in the newspapers—they have done more to create dissatisfaction than all other agencies. If you see anything in them that you know is true, begin to doubt it at once." How true this is today.

Still another barb offered by the Feds is the now notorious Public Law 93-641 (The National Health Planning and Resources Development Act). Dr. James H. Sammons, Executive Vice President of the AMA, states that P. L. 93-641 "is the single most potentially destructive piece of medical legislation ever enacted by Congress." I concur with Doctor Sammons. However, it is refreshing to know that the AMA's petition to become a co-plaintiff with the State of North Carolina in a lawsuit against the U. S. Department of Health, Education and Welfare contesting the constitutionality of this law has been granted. To those of you who may not be aware of the intent of this law, may I say briefly that it calls for all local health facilities and services to be controlled by an area consumer-dominated Health Systems Agency enjoined in a direct contract with HEW. The Secretary of HEW will be the Czar of the proposed nationwide network of Health Systems Agencies.

There are many more legislative problems facing us in this election year. How we solve them is the singular responsibility of every physician in this nation who must *become involved.* To keep up with currently proposed legislation we must sprint, but before we sprint, let's learn about jogging.

(At this point, Doctor Leekie offered an American Medical Association-produced leadership film emphasizing that "doctors know more, and can do more, individually and collectively, than ever before." But, the film emphasized, "if we are committed to the ideal of quality medicine, then we have to be very honest about it. Keep moving . . . do better every day . . . year in, year out . . . keep moving." There currently is "no more important thing that we can do . . . than get deeper and deeper into continuing medical education," the film stressed.)

My head is bloody but unbowed with legislative efforts at the State level. Of approximately 1,500 bills introduced this year, 110 involved medicine and allied fields. Many disturbing bills were modified favorably for medicine. Medical liability bills were duly introduced, but were maneuvered into joint conference committees where they expired and are resting peacefully. They must be aroused and I pledge my active support toward their passage. You must do likewise if we are to succeed.

Many futile hours were spent trying to defeat the optometry bill which was passed in spite of the Governor's veto. This bill became law in May, 1976, and permits optometrists to use drugs diagnostically and therapeutically. West Virginia is the only one of our 50 States to enact this appalling and irresponsible legislation in such broad form. Legal action has been initiated to prevent implementation of this law.

The wisdom of our Legislature was almost outdone by our neighboring state, Pennsylvania, whose Governor sought answers to the "Black Lung" problem from his "consulting physician," a chiropractor. Maybe we are better off than we thought.

On a positive note, I can report that continuing medical education courses numbering 5,800 offered by 1,182 institutions are available for physicians through the AMA. West Virginia University's continuing medical education program under the direction of Dr. N. LeRoy Lapp lends appreciably to the national program and supplements the State Medical Association's CME accreditation efforts to offer West Virginia physicians many opportunities for educational achievements within the State.

Survey panels as proposed and required under our agreement with our liability insurer, Aetna, have begun to function, and should prove beneficial to all physicians involved whether they be defendants or panelists.

You have heard in a report by Dr. Harry S. Weeks, Jr., at the first House of Delegates session on Thursday, and in a presentation by Dr. George R. Callender, Jr., at this morning's scientific session, information updating activities of the West Virginia Medical Institute, Inc., and further implementation of the Federal Professional Standards Review Organization (PSRO) statute in our State. Our Medical Institute continues to stand out nationally among the physician—and I stress "physician"—organizations working with the PSRO program. Let me emphasize this one very important point: the PSRO Law is with us; it obviously is going to remain with us, and physicians must remain on constant alert to make certain that they, and no one else, control professional review activity! It would simply be disastrous for any non-physician organization ever to gain management or other basic control of this program. With that in mind, all of us owe a sincere debt of gratitude to Doctor Weeks as the Institute's President; Doctor Callender as the Medical Director, and to those physicians who have served so well in board and committee assignments in the positive development of the Institute.

Before concluding, may I pay special tribute to our executive staff, and our Executive Secretary, Charlie Lewis, who many times has been ridden hard and put away wet, who lent support, insight, dignity, and talent to this office—for which I shall be eternally indebted. Our sincere thanks to Custer Holliday for his dedication to the Medical Journal, and to education and other program projects. The untiring efforts of the ever-pleasant and capable Mary Hamilton and Sue Shanklin have made the trip seem easier—for which I am grateful. Thanks for the privilege of this office. It has been a rewarding experience I shall ever cherish.

This interesting tradition in our country, one which might be called the parting admonition of an outgoing President as set forth in a President's address, began in September, 1796, with George Washington's farewell address. Its importance as a valedictory has transcended anything that the founder himself might have anticipated. He concluded, as shall I, with a note of humility: "Though in reviewing the incidents of my administration I am unconscious of intentional error, I am nevertheless too sensible of my defects not to think it probable that I have committed many errors. Whatever they may be, I fervently beseech the Almighty to avert or mitigate the evils to which they may tend."

Thank you again.

The cynic puts all human actions into two classes—openly bad and secretly bad.

HENRY WARD BEECHER

Identification, Stabilization, And Transport Of The High-Risk Neonate

Martha D. Mullett, M. D.; and William A. Neal, M. D.

THE outcome of the sick neonate depends upon early identification and therapy. A decrease in neonatal mortality and an increase in the quality of survival have been shown with optimum care of the newborn. In West Virginia, more than three-fourths of all infant deaths occur in the first month of life. Forty per cent of the infant deaths occur in the first 24 hours of life. In 1974, 208 infants died in the first 24 hours of life in West Virginia.[1] These infants are part of a group of infants who are considered high-risk infants.

One-third of all pregnancies are considered high-risk and these give rise to two-thirds of the perinatal complications.[2] High-risk pregnancies can be identified before delivery and plans made for the care of the neonate. Optimum care of the newborn may entail transfer of the mother prior to delivery to a referral center that can best handle the problems the newborn will encounter.

Some of the causes of the high-risk prenancy are listed in Table I. The list is not complete but suggests the types of problems that may be involved in producing infants at risk.

Table 2 lists most of the categories of high-risk infants. Approximately one-third of the high-risk infants will result from normal pregnancies.

Table 1

High-Risk Pregnancy

1. History of reproductive failures
   - Stillbirths
   - Multiple abortions
   - Premature infants
   - Infants with congenital disease
2. Medical diseases in mother
   - Diabetes mellitus
   - Hypertension
3. Maternal factors
   - Age
   - Social status
4. Obstetrical complications
   - Toxemia
   - Abruptio pracenta
   - Placenta previa
   - Rh sensitization
5. Labor and delivery complications
   - Prolonged rupture of membranes
   - Fetal distress
   - Premature labor
   - Abnormal presentation
   - C-Section

The Authors

- **Martha D. Mullett, M. D.; and William A. Neal, M. D., Department of Pediatrics, West Virginia University School of Medicine, Morgantown.**

Evaluation

Evaluation of the high-risk infant begins at birth with assessment of Apgar scores at one and five minutes. The one-minute score reflects the need for further resuscitation and the five-minute score reflects the likelihood of death and neurological sequelae. Low Apgar scores at five minutes (<5) are associated with increase in incidence of neonatal seizures and these infants need to be observed closely.

The initial physical examination should identify problems that may occur in the first days of life. Physical assessment of gestational age of the newborn should be performed using the method described by Dubowitz.[3] This assessment will identify premature infants, postmature infants, small-for-gestational-age-infants (SGA), and large-for-gestational-age-infants (LGA. Identification of these groups of infants will allow anticipation of problems. Premature infants are more apt to have respiratory distress syndrome (RDS), whereas postmature infants have an increased incidence of meconium aspiration. An infant who is LGA suggests that the mother may be a diabetic and these infants are predisposed to hypoglymecia, hypocalcemia and RDS. SGA infants may also have hypoglycemia.

Respiratory symptoms usually begin soon after birth. Tachypnea (rate over 50), grunting respi-

TABLE 2

High-Risk Infant

- Premature
- Postmature
- Small or large for gestational age (SGA or LGA)
- Apgar scores <5 at 5 minutes
- Meconium staining
- Congenital anomalies
- Sepsis
- Respiratory distress
- Hemolytic disease
- Infants of diabetic mothers (IDM)

rations, and retractions may be initial symptoms in RDS, transient tachypnea, or meconium aspiration. In order to distinguish between them, gestational age assessment, chest x-ray, and blood gas data are helpful. Infants with RDS are often premature, have air bronchograms on x-ray, and have increasing cyanosis and acidosis. Infants with transient tachypnea have a similar onset of symptoms, but they are often full-term. Their chest x-ray shows fluid in fissures and perihilar infiltrates. They usually require only small amounts of oxygen and are generally not acidotic. The infant who has meconium aspiration has had previous perinatal stress and meconium stained amniotic fluid. He may be postmature and may have severe respiratory problems. A chest x-ray reveals patchy areas of infiltrate and air trapping. Pneumothorax is a common complication in meconium aspiration.

Congenital anomalies that require surgical correction need to be identified. These may be apparent on initial physical examination, such as scaphoid abdomen and respiratory distress secondary to a diaphragmatic hernia. Infants with gastrointestinal obstruction may be suspected because of polyhydramnios in the mother, or the suctioning of large volumes of fluid from the stomach soon after birth. The more proximal the obstruction, the sooner vomiting will occur after the initial feeding. Infants with a T-E fistula will have choking and vomiting with the first feeding. Infants with ileal obstruction may not vomit for several hours. Infants with open defects such as omphalocele or gastroschisis need to have sterile moist dressings applied immediately.

Congenital heart disease (CHD) in the newborn period may present with cyanosis or congestive heart failure. On physical examination, the presence of central cyanosis, a heart murmur, or decreased femoral pulses may indicate CHD. If the infant is cyanotic and tachypneic, it may be difficult to distinguish CHD from respiratory distress. The presence of a heart murmur may help to distinguish, but the absence of a murmur does not rule out heart disease. Cardiomegaly, tachypneic (over 50), tachycardia (over 150) and hepatomegaly indicate the onset of congestive heart failure. A difference greater than 20 mm. Hg between the flush blood pressure in the upper and lower extremities indicates coarctation of the aorta.

Newborns who are most likely to become septic are those who have had prolonged rupture of membranes or maternal fever. Culturing of blood and cerebral spinal fluid are recommended at birth but antibiotics need not be started unless signs of sepsis are present. These signs in a newborn are subtle and include vomiting, lethargy, and poor temperature control. More overt findings include respiratory distress, shock, and disseminated intravascular coagulopathy.

Stabilization

Proper stabilization of the high-risk infant begins in the delivery room with adequate resuscitation. Table 3 presents a list of proper resuscitation equipment. One of the easiest and often most overlooked supportive measures is proper temperature control. In the delivery room, a radiant warmer is the best heat source and allows exposure of the neonate while supportive care is administered. In the nursery, neutral thermal environment (that temperature which allows the least caloric expenditure to maintain body temperature by the infant) is maintained most easily by the nursing staff in servocontrolled isolettes with the skin temperature probe set at 36.5 degrees C. Manual control of the proper isolette temperature can be maintained using a chart utilizing the infant's age and weight in isolettes without servocontrol.[4]

Prompt correction of acidosis with sodium bicarbonate (1-3 mEq/kg. for mild, moderate, or severe acidosis) by slow intravenous push, and alleviation of cyanosis with oxygen are necessary to stabilize a sick neonate. Correction of hypovolemia with whole blood or ten per cent albumin solution will usually raise blood pressure to normal (> 40 mm. Hg flush), improve skin per-

TABLE 3

Resuscitation Equipment for Delivery Room

Radiant warmer
Ambu bag with O_2 source
Laryngoscope with #0 blade
Endotracheal tube—Portex or Ohio—size 2.5, 3.0, 3.5
Stylette—nasopharyngeal culture wires or sterile pipe cleaners
Stethoscope
DeLee suction trays
Bulb syringes
Suction catheters
Arterial catheters or feeding tubes
Syringes, needles
Saline
Epinephrine
Na bicarbonate
Isuprel (2 cc ampule)
Narcan
Calcium gluconate
$D_{50}W$

fusion and urine output. Use of these supportive measures may make the difference between a premature having moderate or severe RDS.

Infants with gastrointestinal anomalies need intravenous fluids and nasogastric suction prior to transfer. All infants with suspected congenital heart disease should be transferred to a center for cardiac catheterization and possible surgery. Treatment of congestive heart failure with digoxin (0.04 mg./kg. = total digitalization dose) and furosemide (one mg./kg. I.M.) should be started prior to transfer.

Transport

Infants who have been identified as being at high risk of death in the neonatal period need to be transported to a neonatal intensive care unit (NICU). It is the responsibility of the NICU to arrange for prompt transport of the infant. The referring hospital needs to begin the supportive measures outlined above and arrange for a copy of the chart of the mother and infant, a copy of the x-rays, and a clotted tube of the mother's blood to be sent with the infant.

Prior to February, 1975, West Virginia University Hospital accepted sick neonates in transfer without taking responsibility for the method of transfer. Since February, 1975, an ambulance equipped with a transport isolette and other resuscitative equipment and medications, accompanied by a physician, picks up the neonate and transports him to the NICU. Twin-engine planes are available for long transports. Collaborative arrangements with intensive care units in Pittsburgh and Charleston have been made in the event the unit at West Virginia University Medical Center is filled to capacity.

The NICU statistics at West Virginia University Hospital for July, 1974, to June, 1975, are shown in Table 4. The figures have been broken down into survival prior to February, 1975, and after February, 1975, when our transport program began. A significant improvement in mortality has been noted at our NICU since the transport team has been in operation.

Improved identification, stabilization, and transport of high-risk neonates should result in lower morbidity and mortality.

TABLE 4

Newborn Intensive Care Statistics
July 1, 1974 - June 30, 1975
(neonates only)

Total admissions	102	
Survival	72	(71 per cent)
Transported Patients	45	
Survival	35	(78 per cent)
Admissions Feb.-June°	59	
Survival	23	(53 per cent)
Admissions Feb.-June°	59	
Survival	48	(73 per cent)

°Transport Team Started.

References

1. Vital Statistics, West Virginia Department of Health, 1974.
2. Behrman, R. E.: Neonatology—Diseases of Fetus and Infant.
3. Dubowitz, L.; Dubowitz, V., and Goldberg, C.: Clinical Assessment of Gestational Age in the Newborn Infant. J. of Pediatrics. 77:1, 1970.
4. Klaus, M., and Fanaroff, A.: Care of the High Risk Neonate.

Unusual Manifestations Of Acute Lymphocytic Leukemia

John S. Rogers II, M. D.; Elaine Eyster; Robert W. Hamilton, M. D.; And John H. Dossett, M. D.

Abstract

ACUTE lymphocytic leukemia (ALL) is usually suspected in children or young adults from a relatively brief history of symptoms associated with anemia, thrombocytopenia and neutropenia, and the presence of lymphoblasts on the peripheral smear. Occasionally, the diagnosis is obscured by unusual presenting symptoms.

This report describes (1) a five-year-old white female who presented with painful swelling multiple joints and was treated for two months for juvenile rheumatoid arthritis, (2) a 10-year-old white female who was seen for acute renal failure and hyperuricemia which resolved with hydration, (3) a 24-year-old white female who presented with bleeding secondary to diffuse intravascular coagulation (DIC), and (4) a 24-year-old white male with previously diagnosed ALL, but no peripheral blood abnormalities, who became acutely ill with vomiting and confusion secondary to hypercalcemia associated with a marrow relapse.

These unusual manifestations emphasize the necessity for considering ALL in a variety of clinical settings. Abnormalities of the peripheral blood counts should raise one's index of suspicion. Although the diagnosis can often be confirmed by examining the peripheral smear, early diagnosis in atypical cases may require a bone marrow examination.

The case histories of the four patients in whom the diagnosis was obscured by unusual presenting symptoms follow:

Case One

C.M. was a five-year-old white female who developed severe migratory arthralgias and swelling of the major joints of the upper and lower extremities, associated with low-grade fever. Upon one occasion, an evanescent pink rash appeared. Laboratory studies included a hematocrit of 24 per cent, and a white blood count of 8,500 per cu/mm. with 15 per cent neutrophils and 79 per cent lymphocytes. Sedimentation rate was 40 mm./per hour. Latex fixation was non-reactive and a lupus preparation was negative. She was treated with high-dose aspirin with some subjective improvement. Two months later she was seen again for increasing pallor and lethargy, at which time she also was found to have a purpuric lesion over her left eye, hepatomegaly, bilateral swelling of the knees and elbows, and a swollen, tender right ankle. The hematocrit was 8 per cent; the white blood count was 7,000 per cu./mm. with 4 per cent blast forms and many atypical lymphocytes, and the platelet count was 21,800 per cu./mm. The serum uric acid was 1.4 mg./100 ml. A bone marrow revealed sheets of lymphoblasts.

The patient's joint pains improved rapidly over several days with the institution of Vincristine and Prednisone therapy for her leukemia.

The Authors

- **John S. Rogers II, M. D., Department of Medicine, Wheeling Division, West Virginia University School of Medicine; and M. Elaine Eyster, Robert W. Hamilton, M. D., and John H. Dossett, M. D., all from the Departments of Medicine and Pediatrics, The Pennsylvania State University College of Medicine, Hershey.**

Case Two

K.E. was a ten-year-old white female who, after a one-week history of nausea, vomiting and flu-like symptoms, became weak and somnolent. Physical examination revealed a semicomatose and dehydrated female with a rapid pulse and a blood pressure of 58/40. Laboratory examination revealed a white blood count of 1,700 per cu./mm., hemoglobin 7.8 gm./100 ml., and platelet count of 56,000/cu. mm. The blood urea nitrogen was 190 mg./100 ml., creatinine 6.2 mg./100 ml., uric acid 64 mg./100 ml., sodium 127 mg./100 ml., potassium 7.0 mg./100 ml., calcium 5.6 mg./100 ml., and phosphorous 14.5 mg./100 ml. Urinalysis revealed 50 rbc/phf, 10 wbc/phf. and hyaline casts. The urine specific gravity was 1.015 and the pH 5.0.

The patient was hydrated vigorously, treated with Allopurinol, and transfused with whole blood and packed cells. After eight days, her blood urea nitrogen and uric acid had returned to normal. Her hemoglobin was 10.3 mg./100

ml.; her white blood count was 2,100 cu./mm. with 54 per cent neutrophils, 42 per cent mature lymphocytes, four per cent monocytes; and her platelet count was 121,000 cu./mm.

The question of a malignancy arose (specifically acute leukemia); and, therefore, a bone marrow was performed. No aspirate was obtained and the biopsy was insufficient for diagnostic purposes. The peripheral blood showed no leukemic cells.

Two weeks after discharge K.E. was readmitted with a white blood count of 92,000 cu./mm., of which 90 per cent were lymphoblasts. Her bone marrow was replaced with similar cells.

Case Three

L.K. was a 24-year-old white female who presented with a three-week history of easy bruising, manifested by the development of large hematomas on her legs with trivial trauma. On examination she appeared pale and had multiple petechiae and ecchymoses over her entire body. She also was noted to have axillary and cervical adenopathy. Laboratory examination revealed a white blood count of 10,200 cu./mm., hematocrit of 18.7 per cent, and platelet count of 9,000 cu./mm. Her peripheral smear revealed many lymphoblasts, and a bone marrow was replaced with lymphoblasts. Coagulation studies included a prothrombin time of 16.5 seconds, with a control of 12.6 seconds, fibrinogen 76 mg./100 ml. (normal 200-400 mg./100 ml.) and a normal partial thromboplastin time (PTT) and thrombin time. With initiation of anti-leukemic therapy these studies changed over the next four days: her prothrombin time rose to 23.5 seconds, her thrombin time increased to 33.9 seconds compared to a control of 16.8 seconds, and her fibrinogen fell to 18 mg./100 ml.

Because of clinical and laboratory evidence of disseminated intravascular coagulation (DIC), the patient was treated with low-dose heparin (2500 U over six-hour intervals by IV drip) and replacement of deficient coagulation factors. With suppression of the leukemic cell population, the DIC corrected.

The remainder of the patient's course over the next 17 months was stormy, with early marrow relapse, leukemic meningitis and several further marrow relapses leading ultimately to her death. It is of interest that clinical and laboratory DIC reoccurred with each leukemic relapse.

Case Four

S.S. was a 24-year-old white male with known ALL in apparent remission on maintenance therapy who, over a two-week period, developed increasing nausea, vomiting, polydipsia, intermittent headaches and irritability. His white blood count was 6,200 cu./mm.; his hematocrit was 40 per cent, and his platelet count was 101,000 cu./mm. The differential was normal with no blast forms on peripheral smear. Three days later, the patient was seen again for dehydration and confusion. Laboratory studies revealed a serum calcium of 20 mg./100 ml., uric acid 16.5 mg./100 ml., alkaline phosphate 69 mg./100 ml., blood urea nitrogen 62 mg./100, and creatinine 2.4 mg./100 ml. His white blood count was now 2,900 cu./mm. with 2 per cent blast forms. A bone marrow showed sheets of lymphoblasts. A skeletal survey was within normal limits. The patient was treated with steroids, vigorous hydration with normal saline, and intravenous Furosemide and Vincristine. His serum calcium fell gradually over several days to 10.4 mg./100 ml. with resolution of his symptoms, and his blood urea nitrogen returned to normal over a two-week period.

The patient received Vincristine and Prednisone followed by L-Aspariginase and Daunorubicin in an unsuccessful attempt to achieve a complete marrow remission. He was subsequently readmitted six weeks later with symptoms of increasing malaise, nausea, somnolence and disorientation. Laboratory studies revealed a white blood count of 6,100 cu./mm. with 29 per cent lymphoblasts, a hemoglobin of 9.6 gm./100 and a platelet count of 50,000 cu./mm. His serum calcium was 17.7 mg./100 ml., phosphorous 4.0 mg./100 ml., uric acid 9.6 mg./100 ml., and alkaline phosphatase 80 mg./100 ml. (normal, 30-100 u/l). Serum radioimmunoassay studies for parathyroid hormone and prostaglandin E were normal at this time. The patient was treated with a combination of Cytosine Arabinoside, Cyclophosphamide, Vincristine, and Prednisone, but died several weeks later.

Discussion

The diagnosis of acute lymphocytic leukemia is usually suspected in children or young adults with a relatively brief history, rarely longer than two to three months, of anemia, granulocytopenia, thrombocytopenia and lymphoblasts on peripheral smear. The clinical features include fever (often associated with infection), lymphadenopathy, splenomegaly, pallor, and hemorrhage. The leukocyte count is usually elevated, but in about one-third of patients it may be normal or low. Leukemic meningitis is a frequent complication and bone pain is common.[1,2]

Joint involvement may be present in up to 14 per cent of patients with ALL.[3] It is charac-

terized by the sudden onset of severe arthralgias, often with joint effusions, and occasionally associated with erythema. Involvement of the major joints is most common. Fever seems to be a constant companion. Perhaps 40 per cent of cases will have a migratory pattern; however, the pain is not relieved by salicylate therapy.[4,5]

The pathogenesis of the joint findings associated with acute leukemia is obscure. Clinical gout occurs rarely and has been excluded in most clinical and pathologic studies. Evidence for rheumatic or rheumatoid disease is lacking, and leukemic or other synovial involvement is rare. The most plausible explanation is that leukemic involvement of the metaphyseal periosteum subadjacent to the joint capsule is responsible for the joint effusion and pain.[3]

Elevated Plasma Urates

Hyperuricemia and urate nephropathy occur in acute leukemia prior to treatment, but are much more common after induction of antileukemic therapy, especially prior to the availability of Allopurinol. Sandberg *et al* have shown that the amount of uric acid excreted in the urine is not the same in various types of leukemia.[6] High levels are found in acute leukemia, with markedly increased levels seen in ALL. There is good correlation between the magnitude of the white blood count and the amount of uric acid excreted; however, patients with leukopenia have demonstrated increased plasma and urinary uric acid levels.

Rieselback *et al* have found elevated plasma urates in acute leukemia to be associated with increased rates of uric acid excretion and increased urinary uric acid concentration.[7] Increases in all of these parameters were closely correlated with decreased glomerular filtration rate as measured by inulin clearance, and only minimally decreased renal blood flow as measured by PAH clearance. Histologic findings have shown uric acid precipitated in renal tubules in association with internal hydronephrosis and normal glomerular and tubular epithelial cells. Uric acid nephropathy is rapidly reversible with vigorous hydration and/or urinary alkalinization, and filtration rates return to normal within 4 to 15 days.[7,8]

Intravascular Coagulation

DIC has been described in acute leukemia by many authors, most commonly in patients with acute promyelocytic leukemia; however, it also has been reported in ALL.[1,9] The pathogenesis of the DIC has been attributed to lysis of white blood cells with release of procoagulant activity which has been demonstrated in the granules of polymorphonuclear leukocytes. Disrupted granulocytes have been shown to shorten the partial thromboplastin times of normal and Factor VIII-deficient plasma. The presence of Factor VII is necessary for this to occur, however, implicating the release of thromboplastin activity.[10] The release of granules with procoagulant activity does not explain the mechanism of DIC in ALL. Perhaps procoagulant activity may reside in lymphocytes or lymphoblasts as well.

Hypercalcemia In Leukema

The incidence of hypercalcemia in acute leukemia is reported at 2.5 per cent and 4.5 per cent in two different series.[11] Hypercalcemia may precede other manifestations of leukemia, and several cases have been described in which no leukemic cells were noted in the peripheral smear on presentation.[12,13] The pathogenesis of the hypercalcemia has generally been attributed to increased osteolytic activity, and bone lesions are frequent in ALL. Serum phosphorous determinations are normal, making secretion of a parathyroid hormone-like material by the leukemic cells unlikely.[11,13,14] Radioimmunoassay for elevated parathyroid hormone-like activity has been negative in several cases and postmortem histologic examination of parathyroid glands has been normal.[11,14] There is, however, one report of an undifferentiated leukemia with hypercalcemia and increased serum parathyroid hormone-like activity, and small parathyroid glands noted at autopsy.[15] The ability of prostaglandins to release calcium from bone in culture and the association of prostaglandins with several human tumors present another possible pathogenic mechanism. Still another explanation is postulated by Raisz, who has reported an Osteoclast Activating Factor produced by PHA-stimulated lymphocytes.[16] Using cultured lymphoid cell lines from patients with multiple myeloma and lymphoma, Raisz has shown the culture supernatant to have increased calcium resorbing activity which is distinct from PTH, prostaglandins or Vitamin D metabolites.[17] Perhaps O.A.F. secreted by lymphoblasts is a cause of hypercalcemia in ALL.

In conclusion, these four unusual manifestations of arthritis, hyperuricemia, disseminated intravascular coagulation and hypercalcemia emphasize the necessity for considering ALL in a variety of clinical settings. In the early stages of disease, lymphoblasts may not be apparent on the peripheral smear and a bone marrow aspiration may be necessary to establish the correct diagnosis.

References

1. Lascari, A. D.: Leukemia in Childhood. Springfield, Ill.; Charles C. Thomas: 141, 1973.
2. Williams, W. J.; Beutler, E.; Erslev, A. J., and Rundles, R. W.: Hematology. New York, McGraw-Hill, Inc.; 873, 1972.
3. Thomas, L. B.; Fornker, C. E.; Frei, E.; Besse, B. E., and Stabenau, J. R.: The Skeletal Lesions of Acute Leukemia. Cancer. 14:608-621, 1961.
4. Silverstein, M. N., and Kelly, P. J.: Leukemia with Osteoarticular Symptoms and Signs. Ann. Intern. Med. 59:637-645, 1963.
5. Schallar, J.: Arthritis as a Presenting Manifestation of Malignancy in Children. J. Pediatr. 81:793-797, 1972.
6. Sandberg, A. A.; Cartwright, G. E., and Wintrobe, M. M.: Studies on Leukemia, I. Uric Acid Excretion. Blood. 11:154-166, 1956.
7. Reiselback, R. E.; Bentzel, C. J.; Cotlove, E.; Frei, E., and Freireich, J.: Uric Acid Excretion and Renal Function in Acute Hyperuricemia of Leukemia. Am. J. Med. 37:872-884, 1964.
8. Carsoln, D. J., and Jones, B.: Uric Acid Nephropathy Complicating Acute Leukema in Children. Clin. Pediatr. 5:736-742, 1966.
9. Gralnick, H. R.; Marchesi, S., and Givelber, H.: Intravascular Coagulation in Acute Leukemia: Clinical and Subclinical Abnormalities. Blood. 40:709-718, 1970.
10. Komp, D. M., and Donaldson, M. H.: Sepsis in Leukemia and the Shwartzman Reaction. Am. J. Dis. Child. 119:114-116, 1970.
11. Jordan, G. W.: Serum Calcium and Phosphorous Abnormalities in Leukemia. Am. J. Med. 41:381-390, 1966.
12. Haskell, C. M.; Devitta, V. T., and Canellos, G. P.: Hypercalcemia in Chronic Granulocytic Leukemia. Cancer. 27:872-880, 1971.
13. Benvenistic, D. S.; Sherwood, L. M., and Heinemann, H. O.: Hypercalcemia Crisis in Acute Leukemia. Am. J. Med. 46:976-984, 1969.
14. Mowdsley, C., and Holman, R. L.: Hypercalcemia in Acute Leukemia. Lancet. 1:78-80, 1957.
15. Neiman, R. S., and Li, H. C.: Hypercalcemia in Undifferentiated Leukemia. Possible Production of a Parathormone-like Substance by Leukemia Cells. Cancer. 30:942-944, 1972.
16. Horton, J. E.; Raisz, L. G.; Simmons, H. A.; Oppenheim, J. J., and Mergenhagen, S. E.: Bone Resorbing Activity in Supernatant Fluid from Cultured Human Peripheral Blood Leukocytes. Science. 177:793-795, 1972.
17. Mundy, G. R.; Luben, L. G.; Raisz, L. G.; Oppenheim, J. J., and Buell, D. N.: Bone Resorbing Activity un Supernatants from Lymphoid Cell Lines. N. Engl. J. Med. 270:867-871, 1974.

Manuscript Information

Manuscripts to be presented for publication in *The West Virginia Medical Journal* should be typewritten, triple-spaced, on one side only of firm (no onion skin or flimsy), standard letter sized (8 1/2 by 11 in.) white paper. Wide margins (at least 1 1/4 in. on left) should be left free of typing. On the first or title page should be shown the title of the article, the name (or names) of the author, and his degrees. Pages should be numbered consecutively, the page number being shown in the right upper corner along with the surname of the author.

Authors are requested to submit a carbon copy with the original.

Illustrations should be numbered and their approximate locations shown in the text. Each should be identified by placing on its back the author's name, its number and an indication of its "top." Drawings and charts intended for reproduction should be done in black (India) ink on pure white. Photographs should be on glossy paper and minimum of about 5 by 7 in. in size. A legend should be provided for each illustration and, preferably, attached to it.

All scientific material appearing in *The Journal* is reviewed by the Editorial Board. Manuscripts should be mailed to The Editor, West Virginia Medical Journal, Box 1031, Charleston, W. Va. 25324.

Psychiatric Diagnosis And Referral: A Critical Reappraisal

Donald C. Carter, M. D.

In spite of anti-prejudice educational programs of all types, especially attempts to remove stigma from nervous and mental disorders, grave problems of alienation continue to exist in this area of medical care. In fact, we may be moving toward the extrusion of nervous and mental disorders from medical diagnostic handbooks, dumping the patients in a more sophisticated manner than in decades past onto non-medical professionals. This article is written to appraise again the current situation of psychiatric diagnosis and referral problems, in view of that situation still being so very troublesome.

When I compare the three actor-participants, the patient, the referring physician, and the psychiatrist, of our problem I note three inherently different ways of viewing and construing just what the problem really is. Let me begin with the patient.

First, he identifies himself as sick and as a patient by his appearance in our examining rooms: he is considered a cooperative patient if he isn't too rigid in his complaints. By that I mean that when his symptoms, signs, and/or dysfunctional behavior aren't too compulsively repetitive and aren't too alien to himself by reason of an urgent panicky need to be rid of them, etc. On the other hand, when the complaint is made strongly, when demands to be rid of it are urgent and are put to the doctor as his responsibility, and when it recurs in a meaningless pattern, his condition has all the groundwork for a troubled interaction between him and his doctor, especially as regards referral and resolution.

Patient's Response To Illness

This author defines an illness as having all of the above features, but a crucial additional feature must be present—namely, that the patient's own natural attempt at a healing maneuver or response to his problem is obviously making his total organismal functioning worse, even life-threatening. Medical care traditionally approaches this aspect of the total problem first and attempts to moderate the harmful or excessive responses; however, symptomatic treatment studies are being done to relate the person's more hidden causal factors to all of his life's functioning.

The Author

- **Donald C. Carter, M. D., Professor of Behavioral Medicine and Psychiatry, West Virginia University Medical Center, Morgantown.**

Now, in a mental or nervous disorder, the patient's own response to it can often be more harmful and damaging to his total functioning by the particular way he disassociates his (ideas of his) symptoms and appears unable to relate his pain, suffering, and other symptoms to common life problems or stress.

Consequently, he presents with a too brief, or too irrelevant litany of complaints. When his doctor attempts to understand these in any way, the patient doesn't make important connections, nor can the physician with his very extensive knowledge of anatomy, chemistry, pathology, etc. make connections which would open the dysfunction to understanding, compassionate acceptance and, finally, to resolution.

Our patients come from a cultural pool of knowledge that defines an illness as existing and present and deserving of therapy at a time when neither the patients themselves nor others can understand the how or the why of their strong reactions. If the patient reasons out a cause for his pain, dysfunctioning, destructive responses, etc., he is quite likely to explain that he isn't mentally ill and that anyone would feel upset if thus and such happened to them. If he "knows" a reason, he relates to us without the disassociation. This disassociation presents to the doctor as a denial of obvious cause or a refusal to really cooperate with the history-gathering and the efforts of the doctor to understand the problem. Often, such an encounter triggers an indignant retort from the doctor such as "If you don't really want help, why do you come in here taking up my busy time?" Knowing how to penetrate this alienating defensiveness on the part of the patient by the doctor is what I am trying to teach in my role as a medical school professor of psychiatry; it is indeed a challenging life's work.

We all know that syndromes form and develop into a fairly well-formed, rigid sort of overwhelming compulsive state for the patient to try to live

within if the syndrome is reinforced by the patient's interpersonal environment. Intrinsic reinforcers seem to join up with outside events and form the new relatively dysfunctional state we call an illness.

Psychiatric Referral

I have been impressed with the natural selective process of psychiatric referral where disassociative types of patients are referred and refused further primary care, while patients who help the primary physician understand how he is getting sick are not referred. Upon confrontation by me (a psychiatrist) to the non-psychiatric physician as to why he is treating (often quite adequately) this nervous patient and not that one, I get a response to the effect that this one is not psychiatrically sick enough to require referral. In other words, when the doctor calls a patient *really* sick, he, in fact, has alienated the patient by his inability to associate thoughtfully and to cooperate in the complete data-gathering phase of medical care.

From the patient's point of view, however, he is sick when he claims that the purity and mystery of his symptoms are proof of real (physical) illness. He claims further the presence of associating connections with life problems (separation anxiety would be an implicating proof of real psychiatric disorder), and by not making these connections, this proves he therefore needs medical, not psychiatric, care. All of this is well-known to a mature practitioner and I relate it only as groundwork to my message.

Psychiatrist In Delicate Position

From the psychiatrist's viewpoint, he too would like a patient to have searched his thoughts for associative connective reasons and causes to the syndrome by the time the patient appears in his consulting room; but, of course, we are talking about the patient who for whatever reason doesn't. How the psychiatrist acts at this point is typically professional for his sub group of physicians and often appears to be humorous, or bizarre, or absurd, or maybe at best just irrational. But whatever move he makes, he is in a position to lose the rapport of both the other two people: the patient and the referring physician.

If he succeeds in reconverting the symptoms back into life's everyday miseries in a logical and understandable manner, he may incur the jealousy of the referring physician because the rational written report makes it sound so easy or simple. Face is lost by the primary care person for not effecting the reconversion and the patient is embarrassed for letting just everyday misery and problems get his nerves fooled into an (exotically mysterious) illness which didn't result in a real illness after all. It dissolved from peculiar imagination into rational understanding, i.e., "You would have gotten depressed too if you had suffered my (pride's) losses, once I became more fully aware of the loss's meaning to me."

I'm often asked the clear and honest question by primary care physicians, "Why are psychiatrists so prone to irrational belief systems such as inferiority complexes, or blocked libido, or symbiotic interpersonal relationships, when none of these beliefs are proven or even worthy of testing or research?" These theories are especially absurd and irrational when repeated back or quoted by patients as they report back in an unconvinced way the indignation they felt to the primary care physician when these were used as thought-feeling associative tools.

My answer requires compassionate sympathy if it is to be satisfyingly meaningful, let alone approaching rationality. First, remember the basic rule that our culture uses about any response it doesn't understand: what is not associated to anything else must first be suspect of "mental illness." The final proof or clincher is aloof alienation. Being as sensitive to hurt pride as many of us are nowadays, this latter is easier to come by than the former.

Decreasing The Alienation

The psychiatrist's first job is to decrease the alienation. Secondly, he must establish an understanding of the "illness" in himself, in the patient, and in as many people involved as possible. All of this may be said more simply by the term, *reconverting the illness* (which doesn't make medical (scientific-biological) sense), which means tracing the illness back to its origin and clarifying the contributing causes or to that particular person's everyday problems he has to live with.

All schools of psychiatry, all disciplines, all techniques, all theories and knowledge really have this aim and goal. I believe that we can be more appreciative of these reconverting tools if we will see them in this light. Of course they don't make rational, sensible and reproducible guides to us, but each one has worked well on some patient's problem in the psychiatrist's past practice, and often enough so that he has reasonable mastery of one or more of these, assuming he's worth his salt.

Accepting The Unknown

Often, the greater the mastery of one technique and school the more limited the psychiatrist is in general. But all of us are aware of this problem in medicine and we are called upon to know several different sources so we can make our referrals more successful and tailored to the problem. We also recognize that consummate skill in one area is often effective because of mastery even though its particular application doesn't fit exactly.

So, let us not be rigidly condemning or rejecting of what we don't understand. The unknown is becoming more known by many of us, each in his own field. The rest of us can evaluate with some degree of trust, by looking at the results, not the difficult process of mental healing.

Public Warned Against Unproved 'Cures'

All too frequently the American public is gullible bait for the blandishments of articulate medicine men, declares an editorial in the August issue of *Archives of Internal Medicine,* a scientific publication of the American Medical Association.

"The twentieth century has seen a sad saga of international fads involving short-lived miracle drugs, diets and operations," declares Alfred Soffer, M. D., Editor of the Archives.

Some of the ill effects of these fads could have been prevented if the consumer were a discretionary reader, declares Doctor Soffer. He lists several factors for consideration in any new "cure" or "treatment":

1. The value of the product has never been established by studies published in scientific journals with adequate peer review procedures. Its proponents claim that articles substantiating such claims have been rejected by editorial boards because of "prejudice of authoritarian editors and reactionary editorial boards." The enthusiasts often demonstrate a striking naivete about fundamental elements of the discipline of research.

2. The zealot usually accuses the "medical establishment" of being against all those who try to introduce new forms of treatment. Sometimes, as in the case of Laetrile (a supposed cancer cure) the villain is the Food and Drug Administration. In other instances the American Medical Association "serves as the source of fury of columnists and lay groups who insist that the AMA has organized a scientific conspiracy against their beloved drug. Beware of those who wrap about them the flag of 'freedom of choice.' "

3. Therapeutic cults can often be identified by their simplistic theories of causation of disease. They often claim that diet can counteract virulant disease processes. A defender of Laetrile proclaims that the substance "attacks cancer cells and halts their spread."

Use of an approach called "chelation therapy" in which the drug EDTA, or Endrate, is used to treat hardening of the arteries was named by Doctor Soffer as one of the unproved procedures now popular in some areas.

A message from . . .

The President

MAKE FRIENDS WITH A NEUROTIC

THE leaves and most vegetables in West Virginia have changed color, or have ripened, and the air is becoming a bit chilly. Many of us will begin to think of tropical, warmer climates and a vacation from the rigors of practice. I do, especially when Mr. or Mrs. Superneurotic comes into my office with more pains, itches and complaints than Freud or Jung ever ventilated.

My first impulse (and perhaps yours, too) is to run away, or flee as the Israelites did from Egypt. But then you would be missing one of the most rewarding aspects of medical practice—the victory of making friends with one of these troubled creatures.

It seems impossible, and it frequently is. But if you take the time to become interested and show that you care it can be done.

The message for October is: Make friends with a neurotic. God bless you!

John J. Mahood

JOHN J. MAHOOD, M. D., *President*

THE WEST VIRGINIA MEDICAL JOURNAL

Official Organ of the West Virginia State Medical Association

The Publication Committee is not responsible for the authenticity of opinion or statements made by authors or in communications submitted to this Journal for publication. The author or communicant shall be held entirely responsible.

Published monthly on the first day of the month, at Charleston by the West Virginia State Medical Association. Original articles are accepted on condition that they are contributed exclusively to the Journal. Advertising rates furnished on request.

Address all communications to Business Manager, West Virginia Medical Journal, Box 1031, Charleston, West Virginia 25324. Phone 346-0551.

EDITORIALS

GEORGE F. EVANS - R. I. P.

George Evans was a man of great dignity. One was reminded of this at the funeral rites which seemed so fittingly appropriate. Medical colleagues, friends, and family filled the church and lined silently outside. There they heard recited the simple but stately psalms. No eulogy. Nothing pretentious. But dignified. A short trip to the cemetery. And then George was laid to rest.

He had read his own chest x-ray back in April. There it was. He had seen it many times before, but this time it was growing within himself. A trip to the hospital followed. Surgery disclosed what he already knew. Radiation was next and George began winding up his affairs . . . the office, patients, letters owed, and the *Journal*. At 5:30 A.M., August 25, 1976, death mercifully intervened in the form of a pulmonary embolus.

George F. Evans was born at St. Mary's, Ontario, Canada, on June 14, 1900. At age 23, he graduated from McGill Medical School in Montreal. There followed an internship at Binghampton, New York, and residency at Union Hospital in Fall River, Massachusetts, before he arrived in West Virginia as Medical Director at Hopemont Sanitarium in Preston County. It was there that he met and married his beloved, Elah, the daughter of Dr. J. G. Pettit, the Superintendent of Hopemont Sanitarium.

His introduction to organized medical affairs was as President of the Preston County Medical Society in 1931. He served as President of the West Virginia State Medical Association in 1958-59 after serving on its Council from 1949 to 1952. For 17 years, he was a member of the Medical Licensing Board of West Virginia and for several years served as Chairman of that Board.

From 1934 until he was stricken, except for the period of his service as Lieutenant Colonel in the Army Medical Corps, Doctor Evans practiced Internal Medicine in Clarksburg. During his Army career, he was decorated with the Legion of Merit for meritorious service in Algeria and Italy.

In recognition of his dedication to the practice of his specialty, he was honored by designation as a Fellow of the American College of Physicians and the American College of Chest Physicians. Throughout his career, he remained active in voluntary health associations, particularly the TB Association, of which organization he served as President.

Doctor Evans was named to the Publication Committee of the West Virginia State Medical Association in 1956 and was elected Chairman of that Committee and Editor of the *Journal* in May, 1962. He served in that capacity until his resignation five days before his death.

As Editor of the *Journal*, Doctor Evans exercised a strong and steadying influence on the policies of the West Virginia State Medical Association and, indeed, on American medicine. By nature moderate in speech and manner, he could, nevertheless, raise his voice in the pages of his *Journals* to levels of righteous wrath and indignation when occasion demanded. His thoughtful and reasoned approach to the problems of medicine in West Virginia during his term as Editor brought great benefit to the doctors and to all citizens of West Virginia.

George is sorely grieved and missed by all his colleagues on the *Journal* and by the staff of the Association. His passing is a loss to the entire West Virginia State Medical Association and to the citizens of the State.

Our sympathy goes out to his widow, Elah. We retain our memories of a great man.

Emerging awareness of the need to ration health care is an insight distasteful to anyone concerned with the provision of health care, and, indeed, is so distressing to professional social planners that open reference to it is just never made. And yet there is simply no other inference to be drawn, except the need to ration health care, from the frantic efforts at all levels of planning to devise some means of controlling health care costs.

RATIONING MEDICAL CARE

This must be all very frustrating, if not actually embarrassing, to those political opportunists who have spent the past 30 years criticizing our medical care system and promising total health care to all through a system of national health insurance. Now they are faced with the urgent necessity of formulating a scheme to mete out those benefits through some system of rationing even before they can deliver the promised prize.

A good part of the rage they direct at the medical profession stems from their inability to cajole or coerce doctors into acting as agents of a rationing process. In this, they fail to appreciate the truly personal relationship between a doctor and his patient. To planners, there are just medical care providers and medical care consumers. The relationship between these two groups should be about the same as that between those behind and those in front of a cafeteria serving line.

In a medical system with a little bit more regard for human feelings such as ours, when a patient has the personal means or is entitled to benefits under an insurance plan from whatever source, the doctor is *obligated* to provide the most and the best care for that patient up to the very limits of whatever resources are available, if need be. If no limits are stipulated, costs are theoretically infinite or, at least, not a factor to be considered.

The essentials of the problem are that politicians promise everything in the way of medical care to patients and potential patients; doctors do their utmost to fulfill those promises made by politicians to patients; and politicians next worry and fuss over ways to make the doctors stop doing that without, in the process, making themselves look foolish.

To planners, the chief attraction of an HMO approach to medical care is that in this approach the doctor is made to function as a rationer. Funds are budgeted and the doctor rations benefits and care, or the plan goes broke and he does not get paid.

Much else is made of HMOs, of course. The very name, Health Maintenance Organization, implies some unique function or capability in preventive medicine. This is a misconception deliberately fostered by planners. No mention of the built-in rationing system is ever heard.

Possession of an arbitrary power to ration health care might be attractive, or become so, to some doctors. The record to date, however, indicates that the great majority of doctors find little to recommend itself in the HMO style of dispensing care. Doctors simply prefer having the personal relationship they have traditionally enjoyed with their patients, along with all of the obligations and responsibilities that relationship carries with it.

Peer review mechanisms which assure quality and protect against unneeded, redundant or wasteful expenditures are acceptable to doctors. For patient and for doctor, medical peer review is far preferable to any system of medical rationing.

Guidelines for the management of hopelessly ill patients have been issued by a few New England hospitals. Reports indicate that while these guidelines stop short of an outright approval of euthanasia, they set forth conditions wherein doctors may withdraw life-support systems.

HOPELESS CASES

To get right to the point, this is a mistake. It is a mistake because the guidelines make it unmistakably clear that a doctor should be the one who performs the final, and fatal, deed.

We do not dispute the fine logic and humanistic reasoning used to arrive at the justification for ending a life of raging pain or one with no meaning. We violently dispute the need to involve a doctor in the final act of ending that, or any, life.

Doctors are healers and savers of life. We are educated and trained to do this. We spend years of effort improving our skills and techniques to heal and to save life. Our patients know us and trust us as healers. How far can they trust us when they suspect we are part-time executioners? What training is needed to pull a plug? To kill?

Killing is certainly what is being authorized. How many physicians could be found to perform the final act if, in its wisdom, the board of trustees of a hospital decreed that when all the proper criteria were met, a 45 caliber automatic held just above the right ear and fired at a cor-

responding spot just above the left ear should be the proper and approved method of terminating a life? The result is the same as that accomplished by pulling a plug. Only quicker. And more humane, avoiding, as it would, any terminal suffering or ugly display such as gagging or retching, convulsing or gasping for air, or any other manifestation of an ill-thought urge to cling to life.

The decision to end a life is not in the province of Medicine. There is no justification for such a decision within the sphere of medical ethics. Doctors simply lack the competence for such a decision.

Traditionally, decisions in regard to the ending of life have been made by the judiciary. Executioners have been employed to carry out such court orders. The role of the doctor has been to confirm that the dictate of the court has been accomplished.

That's the way it should be. If there are to be executions, humanistic or otherwise, let them hire executioners. Let no one assume this is fit work for doctors.

ELECTION POSES CRITICAL ISSUES FOR PHYSICIANS

By the time the next issue of *The Journal* reaches your desk, the 1976 General Election likely will be history. For medicine, as well as for many, many other segments of our increasingly complex society, the November 2 balloting will be as important as any in our state and national history.

The next few weeks will bring debates, millions of words of oratory, and some of the most high-pressure political advertising that has ever been bounced off a perhaps already groggy public. In all of this furore, the real issues of this most critical year can become confused to the point of losing any real identity or meaning.

For the practicing doctor, however, this is one election in which every reasonable effort must be made to keep the important things in sharp focus. The doctor knows that—more and more—his basic rights and his opportunities to do the one thing for which he is finally responsible—to provide the best possible care for his patients—are endangered.

The indications are that the practicing physician not only is sorting out the issues in increasing measure, but developing an inclination to do something about them. Doing something, of course, must begin with a close examination of political candidates and what they stand for—and an appropriate but effective follow-through in the voting booth.

The physician knows what he has been trained over many long and arduous years to do. He knows how to put his training and his general professional expertise to work. But he also knows that many real and potentially restrictive things either are already at hand or on the horizon that literally can handcuff him and in effect short-circuit good patient care.

Where do the state and national candidates stand on these kinds of issues—on national health insurance and the various forms it might or might not take; on imposing often rigid nonmedical, bureaucratic controls over the practice of medicine; on literally turning the practice of medicine over to persons or groups quite well trained in certain paramedical fields, but NOT as doctors?

The physician willing to take a little bit of time can sort out the candidates, and the things for which they really stand, in pretty accurate fashion. And he can get the proper message across to substantial numbers of other persons, again without too great a demand on his time. Finally, he has the power of the vote.

If the doctor needs a "refresher" relative to many of the other challenges of the day, he need only review bulletins provided him during the 1976 sessions of the West Virginia State Legislature—and the progress of pending Federal legislation so effectively charted week after week by the American Medical Association's American Medical News.

Maybe the doctor as an individual, and the medical community as a whole, haven't been the strong voice they could be in political and legislative matters. It's indeed true that recent years have seen development—and in some cases enactment—of both state and federal legislation that can harm and interfere with the delivery of patient care.

But it's never too late to get started—to become more involved. In fact, 1976 shapes up as THE year to do just that. The doctor must know his candidates and what they stand for; and he must do all he properly can to support those candidates that stand for what he believes in—the kind of a society that not only will permit, but assure, good health care.

GENERAL NEWS

Doctor Mahood Assumes Presidency Of State Medical Association

Dr. John J. Mahood, a Bluefield dermatologist, was installed by the West Virginia State Medical Association as its President at the concluding session of the House of Delegates during the 109th Annual Meeting Saturday, August 21, at The Greenbrier in White Sulphur Springs.

The convention began with a meeting of the Council on Wednesday, August 19. Registration totaled 525 and included 333 physicians.

Doctor Mahood was installed by Dr. Jack Leckie of Huntington, the retiring President, who had delivered the traditional President's address a few minutes earlier. The text of the address appears in the scientific section of this issue of *The Journal.*

Doctor Leckie automatically became Chairman of the Council for the new Association year, succeeding Dr. William E. Gilmore of Parkersburg.

Other New Officers

Elevated to President Elect from Vice President was Dr. Joseph A. Smith, a Dunbar family physician, who will assume the Presidency at the 1977 meeting, also scheduled at The Greenbrier next August 24-27.

Dr. Robert D. Hess of Bridgeport was elected Vice President and Dr. Kenneth G. MacDonald of Charleston was re-elected to his 12th one-year term as Treasurer. Doctor Hess is a family physician and Doctor MacDonald is a surgeon.

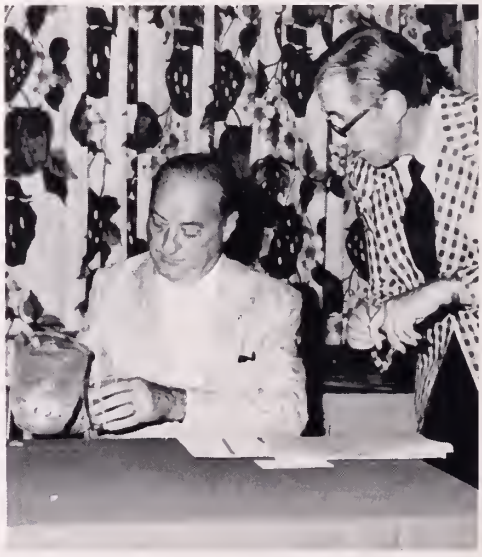
Dr. Richard E. Flood of Weirton was re-elected as a Delegate to the American Medical Association, with Dr. Harry S. Weeks, Jr., of Wheeling, re-elected as Alternate Delegate.

Four new Council members were named, with five other physicians re-elected to two-year terms. Dr. Joseph T. Mallamo of Fairmont, who was appointed in May by then President Leckie to fill the unexpired term of Dr. Robert G. Janes, also of Fairmont, was elected to his first full term on the Council.

Dr. M. V. Kalaycioglu of Shinnston was appointed by President Mahood to fill the unexpired term of Doctor Hess as a result of the latter's election as Vice President.

The other new Councilors are Drs. Wallace B. Murphy of Grafton, Winfield C. John of Huntington and Carl J. Roncaglione of Charleston.

Re-elected were Drs. L. Walter Fix, Martinsburg; Lyle D. Vincent, Parkersburg; Walter E. Klingensmith, Beckley; and Ray M. Kessel, Logan.



In the left photo, Dr. Tenley E. Albright of Boston (second from left) talks with (from left) Drs. William E. Gilmore of Parkersburg, N. LeRoy Lapp, Morgantown; and Robert D. Hess, Bridgeport. Doctor Albright delivered "The Thomas L. Harris Address" during opening exercises of the 109th Annual Meeting of the West Virginia State Medical Association, August 18-21, at The Greenbrier in White Sulphur Springs. In the right photo, Dr. Jack Leckie of Huntington (right), then President of the State Medical Association, chats with Dr. Richard E. Palmer of Alexandria, Virginia, President of the American Medical Association, who addressed the first session of the House of Delegates at the Annual Meeting.

Holdover Councilors whose terms will expire in 1977 are Drs. Robert R. Weiler, Wheeling; Robert J. Nottingham, Morgantown; Robert W. Bess, Jr., Piedmont; Louis W. Groves, Jr., Richwood; J. L. Mangus, Charleston; and David F. Bell, Jr., Bluefield.

Under the terms of the Association's Constitution, Doctor Gilmore, the Council Chairman last year, becomes Councilor-At-Large for 1976-77.

As the result of the adoption by delegates this year of a constitutional amendment specifically providing that the Association Past President three years removed shall serve as Junior Councilor-At-Large, Dr. Thomas A. McCoy of Charleston will fill that role in 1976-77.

Amendments and Resolutions

During its pre-Convention business session, Council accepted The Greenbrier's invitation to return there for the 1977 Annual Meeting next August 24-27.

In other action during its two sessions, the House of Delegates:

—Adopted constitution and bylaws amendments providing for a retired membership classification within the Medical Association structure.

—Approved a bylaws change increasing from $6 to $12 the amount allocated from annual membership dues for medical scholarships.

—Approved establishment of three new sections, in dermatology, emergency medicine and nuclear medicine, within the Medical Association; and directed appropriate committee action to provide in the Association bylaws guidelines for development of scientific and other activities by the various sections.

—Adopted four resolutions, including one calling upon the Medical Association to establish a mechanism to "advise, assist and support West Virginia physicians regarding counterlitigation against a party or parties who, in the opinion of appropriate legal counsel, have initiated baseless and frivolous professional liability proceedings."

Constitution and bylaws amendments, and resolutions, adopted by the House are covered in detail elsewhere in this issue of *The Journal.*

The President

Doctor Mahood, a native of Bluefield, is the son of the late Alex B. Mahood, a well known architect who designed the Creative Arts Center and the Towers at West Virginia University and many other buildings in West Virginia, Virginia and Kentucky.

He attended public schools in Bluefield and was graduated from the University of Virginia with a Bachelor's degree in 1943. After teaching school briefly at Pocahontas (Virginia) High School, he entered the University of Virginia School of Medicine and was awarded his M. D. degree in 1947. He interned at the City of Detroit Receiving Hospital in Michigan, and was in general practice in Charlottesville, Virginia, and Matoaka, West Virginia, before entering a residency program in dermatology at Wayne State University in Detroit in 1949. He began private practice of dermatology in 1952 in Bluefield.

Doctor Mahood is Past President of the Mercer County Medical Society, the Mercer County Cancer Unit, and the Mercer County Easter Seal Society. He is a member of the Washington, D. C., Dermatological Society, the Atlantic Dermatological Society, the American Academy of Dermatology, The Masters Dermatological Association, and Rotary Club.

He served for 20 years as Secretary of the Mercer County Medical Society and 11 years as Director of the Mercer County Health Department. In the State Medical Association, he has held a number of leadership positions, including that as a member of the Association's governing Council, and as Vice President and President Elect.

Doctor Mahood is married to the former Norma Dawson of Bramwell and is the father of three daughters, Kathleen, Jean and Julia.

The President Elect

Doctor Smith served two terms on the Association's Council, beginning in 1968. He was President of the Kanawha Medical Society in 1967, and served on its Council in 1966-68. He is a Delegate of the West Virginia Chapter to the American Academy of Family Physicians.

A native of Sutton, Doctor Smith was graduated from West Virginia University and received his M. D. degree in 1950 from the Medical College of Virginia. He interned at Charleston General Hospital.

He currently is serving a second five-year term on the Medical Licensing Board of West Virginia.

The Vice President

Doctor Hess, who was elected to two terms on the Association's Council beginning in 1973, is Director of Medical Education at United Hospital Center in Clarksburg. A Diplomate of the American Academy of Family Physicians, he is a member of the Board of Directors of the West Virginia Chapter (District V) of the AAFP.

He is Chairman of the State Medical Association's West Virginia University Liaison Committee, and has served on the Association's committees on Medical Education and Hospitals, Medical Scholarships, and Military Medical Affairs. He was Chairman of the Program Committee for the 1976 Annual Meeting, and is currently Vice Chairman of the West Virginia Joint Council on Teaching Hospitals.

A native of Bridgeport, Doctor Hess was graduated from West Virginia University and received his M. D. degree in 1958 from the Medical College of Virginia. He served his internship and residency at Memorial Hospital in Charleston.

Opening Session

Dr. Tenley E. Albright of Boston, a general surgeon and the 1956 Olympic Gold Medal Winner in Women's Figure Skating, addressed the physicians during opening exercises preceding the first general scientific session on Thursday morning.

First House Session

Dr. Richard E. Palmer, President of the American Medical Association, was speaker for the first session of the House of Delegates on Thursday afternoon.

Doctor Leckie presented to Dr. John E. Jones, Dean of the West Virginia University School of Medicine, a check for $21,163.14; and to Dr. Ray M. Kessel, Chairman of the Department of Family Practice at the Marshall University School of Medicine (representing Dr. Robert W. Coon, Dean), a check for $2,207.10, during the initial session. The checks represented an annual contribution by West Virginia physicians and the Woman's Auxiliary members to the medical schools through the Education and Research Foundation of the AMA.

Affiliated Societies, Sections Elect New Officers

Some of the scientfic sections, associations and societies affiliated with the West Virginia State Medical Association elected new officers at sessions during the Association's 109th Annual Meeting at The Greenbrier. The groups and new officers reported included:

Section on Surgery—Dr. Walter G. Klingensmith, Beckley, re-elected Chairman.

Section on Orthopedic Surgery—Drs. Jack Pushkin, Charleston, President; Robert N. Clark, Morgantown, Vice President; Arthur A. Abplanalp, Charleston, re-elected Secretary-Treasurer.

Section on Internal Medicine—Dr. Harold Selinger, Charleston, Chairman.

Section on Urology—Drs. A. Thomas McCoy, Charleston, President; and James W. Lane, Charleston, Secretary-Treasurer.

Section on Dermatology—Drs. William D. McLean, Beckley, President; Nazem Abraham, Huntington, Vice President; and Harold L. Saferstein, Wheeling, Secretary-Treasurer.

West Virginia Chapter, American Academy of Pediatrics—Drs. Herbert H. Pomerance, Charleston, Chairman; Gilbert A. Ratcliff, Jr., Huntington, Alternate Chairman; and Kenneth L. Wible, Morgantown, Secretary-Treasurer.

West Virginia Chapter, American College of Emergency Physicians—Drs. Donald R. Lantz, Parkersburg, President; William E. Walker, Huntington, Vice President; and Walter H. Moran, Jr., Morgantown, Secretary-Treasurer.

New officers of the West Virginia State Medical Association were elected during the 109th Annual Meeting, August 18-21, at The Greenbrier in White Sulphur Springs. Seated (from left) are Drs. John J. Mahood, Bluefield, President; Robert D. Hess, Bridgeport, Vice President; Carl J. Roncaglione, Charleston, newly elected to a two-year term on the Council; Joseph A. Smith, Dunbar, President Elect; Jack Leckie, Huntington, Immediate Past President and Chairman of the Council, and Kenneth G. MacDonald, Charleston, re-elected Treasurer. Standing (from left), are Drs. Richard E. Flood, Weirton, re-elected as a Delegate to the AMA; Joseph T. Mallamo, Fairmont (appointed to the Council in May), elected to his first term on Council; Walter E. Klingensmith of Beckley and L. Walter Fix, Martinsburg, re-elected to two-year terms on Council; and Harry S. Weeks, Jr., Wheeling, re-elected as Alternate Delegate to the AMA. Not shown are Drs. M. V. Kalaycioglu, Shinnston, appointed to Council by President Mahood to fill the unexpired term of Doctor Hess; Wallace B. Murphy of Grafton and Winfield C. John of Huntington, newly elected to Council; and Lyle D. Vincent of Parkersburg and Ray M. Kessel, Logan, re-elected to Council.

West Virginia Chapter, American Society of Internal Medicine—Drs. Richard G. Starr, Beckley, President; and John M. Daniel, Beckley, Secretary-Treasurer.

West Virginia Radiological Society—Drs. Orlando F. Gabriele, Morgantown, President; Charles H. McKown, Jr., Huntington, Vice President; and James T. Smith, Charleston, Secretary-Treasurer.

Council Honors Colleagues, Hears Program Reports

The State Medical Association's Council recognized the service provided by three of its members during its pre-convention meeting at The Greenbrier in August. They were:

Drs. L. H. Nefflen of Elkins and W. Alva Deardorff of Charleston, ineligible for re-election this year after serving two consecutive two-year terms; and Dr. Robert G. Janes of Fairmont, who resigned before the end of his term because of other commitments.

Council heard reports relative to programs involving work with physicians and health care in West Virginia from State Workmen's Compensation Commissioner B. Frederick Becker III; Welfare Commissioner Thomas R. Tinder; Insurance Commissioner Donald W. Brown, and H. F. Hughes of Columbus, Ohio, Manager of Medicare Field Operations in the State for Nationwide Mutual Insurance.

Dr. Carl J. Roncaglione of Charleston, Chairman of the Association's Medical Economics Committee, provided a review of activities by the Committee and its Subcommittees, along with recommendations for further study and action.

Dr. N. H. Dyer, West Virginia's Director of Health, brought Council up to date on developing plans for implementing the swine flu inoculation program.

Dr. Stephen D. Ward Named State Medical Journal Editor

Dr. Stephen D. Ward, Wheeling psychiatrist and an Associate Editor since 1970, is the new Editor of the *Medical Journal* and Chairman of the Medical Association's Publication Committee.

Stephen D. Ward, M. D.

Doctor Ward was elected at an August 20 meeting of the Publication Committee. He succeeds the late Dr. George F. Evans of Clarksburg, who re-

In the left photo, Dr. Jack Leckie of Huntington (right), as President, presents Dr. John E. Jones, Dean of the West Virginia University School of Medicine, a check for $21,163.14 during the initial House session of the 109th Annual Meeting of the State Medical Association. In the center photo, Doctor Leckie presents a check for $2,207.10 to Dr. Ray M. Kessel, Chairman of the Department of Family Practice at the Marshall University School of Medicine (representing Dr. Robert W. Coon, Dean). The checks represented an annual contribution by West Virginia physicians and the Woman's Auxiliary members to the medical schools through the Education and Research Foundation of the AMA. In the right photo, Drs. Norman Samuels, C. Vincent Townsend and L. Walter Fix (from left), all of Martinsburg, Delegates from the Eastern Panhandle Medical Society, are shown during the House session.

signed as Editor and Publication Committee Chairman because of illness after holding those posts since May, 1962. Doctor Evans died on August 25.

Meeting during the Annual Convention of the Medical Association at The Greenbrier in White Sulphur Springs, the Publication Committee also took these actions:

—Voted Editor Emeritus status for Doctor Evans.

—Gave detailed consideration of a recent *Medical Journal* readership survey, and developed a Publication Committee-administrative staff mechanism to implement practical suggestions from physicians, as developed by the survey, for continued improvement of the *Journal* contents and format.

—Agreed to study a draft of a Medical Journal-Publication Committee editorial policy statement designed to clarify responsibilities within the overall State Medical Association structure, and provide comments and recommendations to Doctor Ward and the administrative staff.

—Voted, in line with a previous commitment, to request Council to allocate funds to print 1,000 copies of a history of the Woman's Auxiliary to the State Medical Association which has been developed by Mrs. Joe N. Jarrett of Oak Hill.

Doctor Ward also instructed staff to work with him in preparing a resolution commending Mrs. Jarrett for presentation by the Publication Committee to the Medical Association House of Delegates during the 1977 Annual Meeting.

Doctor Ward, who is a member of the American Medical Association's Council on Legislation, is from a family with a broad journalism background, and many editorials he has written for the *Medical Journal* have been reprinted or quoted in AMA and other publications and newspapers.

He entered practice in Wheeling in 1962; is a Past President of the Ohio County Medical Society, and was a member of the State Medical Association's Council for four years.

Doctor Ward received his M. D. degree in 1964 from the University of Pittsburgh School of Medicine. He served an internship at Mercy Hospital in Pittsburgh, and a residency at the Western Psychiatric Institute and Clinic of the University of Pittsburgh School of Medicine in 1955-58.

Winners Named In Medical Golf, Tennis, Skeet Tournaments

Dr. Franklin W. Mallamo of Fairmont won low gross honors for physicians in the annual Medical Golf Tournament held in conjunction with the State Medical Association's Annual Meeting in White Sulphur Springs, August 18-21.

The team of Dr. R. S. Birckhead of Gauley Bridge and James L. Farley, Executive Director of Pleasant Valley Hospital in Point Pleasant, won the men's tennis honors, followed by the duo of Drs. Harold L. Saferstein of Wheeling and Richard B. Hornick of Baltimore, Maryland.

Mrs. William E. Gilmore of Parkersburg won low gross honors in women's golf, followed by Mrs. William E. McNamara, Jr., of Wheeling and Mrs. Franklin W. Mallamo of Fairmont.

The winning team in the women's tennis play was made up of Mrs. Joseph A. Maiolo of Beckley and Mrs. Thomas G. Potterfield of Charleston. Mrs. Constantino Y. Amores of Charleston and Mrs. C. Richard Daniel of Beckley took second honors.

Dr. Cordell A. de la Pena of Clarksburg was the trap shooting winner, and also won both the 12 and 20-gauge skeet competition.

Dr. John J. Mahood of Bluefield, who was elected President of the State Medical Association during the Association's 109th Annual Meeting, August 18-21, at The Greenbrier, is shown in the left photo with Mrs. Mahood (Norma) and (from left), their daughters, Julia, Jean and Kathleen. On the right is Dr. Paul M. Stevens of Houston, Texas, who was a speaker during the first general scientific session at the Annual Meeting.

Standing and Special Committees Appointed by Doctor Mahood

Here is a partial list of the standing, special and ad hoc committees which have been named by Dr. John J. Mahood of Bluefield, President of the West Virginia State Medical Association, to function during his one-year term of office. The remaining committees will be published in the November issue of *The Journal.*

Aging

Lee B. Todd, Quinwood, Chairman; Myer Bogarad, Weirton; Richard Hamilton, St. Marys; Sam Milchin, Bluefield, Virginia; and Pat A. Tuckwiller, Charleston.

Cancer

David B. Gray, Charleston, Chairman; Alvin L. Watne, Morgantown, Vice Chairman; John J. Battaglino, Jr., Wheeling; Walter B. Bice, Jr. and F. Lloyd Blair, Parkersburg; William B. Blake, Jr. and James P. Carey, Huntington; L. Walter Fix, Martinsburg; S. William Goff, Parkersburg; Arthur E. Levy, Williamson; Catalino B. Mendoza, Jr., Clarksburg; Hu C. Myers, Philippi; Robert W. Neilson, Bluefield; Jess S. Renedo, Wheeling; Charles W. Thacker, Parkersburg; and John W. Trenton, Kingwood.

Constitution and Bylaws

George R. Callender, Jr., Charleston, Chairman; Richard E. Flood, Weirton; Carl B. Hall, Charleston; J. C. Huffman and Joseph B. Reed, Buckhannon; James P. Thomas, Bluefield; Harry S. Weeks, Jr., Wheeling; and J. Hugh Wiley, Morgantown.

Insurance

Lyle D. Vincent, Parkersburg, Chairman; John T. Chambers, Charleston; R. U. Drinkard, Wheeling; L. Walter Fix, Martinsburg; F. Perry Greene, Jr., Parkersburg; H. Summers Harrison, Morgantown; James A. Heckman, Huntington; Upshur Higginbotham, Bluefield; C. A. Hoffman, Huntington; Kenneth G. MacDonald and A. Thomas McCoy, Charleston; Buford W. McNeer, Hinton; and C. Vincent Townsend, Martinsburg.

Sub-Committee on Investments and Trust

C. A. Hoffman, Chairman; Kenneth G. MacDonald (1977); Upshur Higginbotham (1978); John T. Chambers (1979); and A. Thomas McCoy (1980).

Ad Hoc Committee on Professional Liability

Jack Leckie, Huntington, Chairman; J. Elliott Blaydes, Jr., Bluefield; John T. Chambers, Charleston; William E. Gilmore, Parkersburg; Kenneth G. MacDonald, Charleston; and Worthy W. McKinney, Beckley.

Interprofessional Relations

William E. Gilmore, Parkersburg, Chairman.

Sub-Committees

Medico-Legal: Charles W. Merritt, Beckley, Chairman; John C. Bryce, Parkersburg; John F. Otto, Jr., Huntington; and Paul H. Revercomb, Charleston.

Medicine and Religion: Joe N. Jarrett, Oak Hill, Chairman; T. Keith Edwards, Bluefield; and William L. Neal, Huntington.

Medicine and Pharmacy: L. Dale Simmons, Clarksburg, Chairman; R. C. Cowan, Jr., Parkersburg; and John L. Fullmer, Morgantown.

Medical-Dental Liaison: John A. B. Holt, Charleston, Chairman; George L. Armbrecht, Wheeling; and Gene Lee Hackleman, Huntington.

Nurses Liaison: Richard E. Flood, Weirton, Chairman; Billie M. Atkinson, Parkersburg; Jean P. Cavender and Peter A. Haley, Charleston; and L. Dale Simmons, Clarksburg.

Legislative

Frank J. Holroyd, Princeton, Chairman; Charles W. Merritt, Beckley, Vice-Chairman; W. P. Bittinger, Oak Hill; A. Paul Brooks, North Parkersburg; George R. Callender, Jr., Charleston; William H. Carter, Williamson; John T. Chambers, Charleston; George A. Curry, Morgantown; Del Roy R. Davis, Kingwood; Vernon E. Duckwall, Elkins; Roy A. Edwards, Jr., and A. C. Esposito, Huntington; L. Walter Fix, Martinsburg; Richard E. Flood, Weirton; George Gevas, and William E. Gilmore, Parkersburg; Paul E. Gordon, Clarksburg; Louis W. Groves, Jr., Richwood; N. B. Groves, Martinsburg; Carl B. Hall, John M. Hartman and John A. B. Holt, Charleston; J. C. Huffman, Buckhannon; M. V. Kalaycioglu, Shinnston; Jack Leckie, Huntington; Milton J. Lilly, Jr. and A. Thomas McCoy, Charleston; Paul L. McCuskey, Parkersburg; Worthy W. McKinney, Beckley; Joseph D. Romino, Fairmont; Carl J. Roncaglione, Charleston; Robert G. Shirey, Lewisburg; Pat A. Tuckwiller, Charleston; A. J. Villani, Welch; Lyle D. Vincent, Parkersburg; David E. Wallace, Madison; Stephen D. Ward, Wheeling; Henry F. Warden, Jr., Bluefield; Harry S. Weeks, Jr. and Robert R. Weiler, Wheeling; J. Hugh Wiley, Morgantown; and Moseley H. Winkler, Charleston.

Maternal and Perinatal Fetal Welfare

T. Keith Edwards, Bluefield, Chairman; Robert D. Crooks, Parkersburg; Larry D. Curnutte and Frederick H. Dobbs, Charleston; W. Gene Klingberg, Morgantown; A. Robert Marks, Clarksburg; Thomas G. Potterfield, Charleston; Robert P. Pulliam, Beckley; and Charles A. White, Morgantown.

Sub-Committee on Perinatal Fetal Welfare

W. Gene Klingberg, Chairman; Robert D. Crooks, A. Robert Marks and Thomas G. Potterfield.

Medical Aspects of Sports

K. Douglas Bowers, Jr., Morgantown, Chairman; Dewey Bensenhaver, Petersburg; Colin M. Craythorne, Huntington; Thomas O. Dotson, White Sul-

phur Springs; James S. Kessel, Ripley; Ray M. Kessel, Logan; Walter E. Klingensmith, Beckley; Tony C. Majestro, Charleston; George Naymick, Weirton; Carl J. Roncaglione, Charleston; George W. Rose, Clarksburg; Michael A. Santer, Jr., Parkersburg; and Clifford Sperow, Martinsburg.

Medical Education and Hospitals

Herbert H. Pomerance, Charleston, Chairman; Charles E. Andrews, Morgantown; Leo H. T. Bernstein, Martinsburg; Rowland H. Burns, Huntington; William H. Carter, Charleston; John S. Cook, Welch; Creel S. Cornwell, Jr., Clarksburg; Del Roy R. Davis, Kingwood; C. Richard Daniel, Beckley; Thomas O. Dotson, White Sulphur Springs; William J. Echols, Huntington; T. Keith Edwards, Bluefield; Albert C. Esposito, Huntington; Alfred D. Ghaphery, Wheeling; Robert D. Hess, Bridgeport; Guy F. Hollifield, Beckley; Winfield C. John, Huntington; George M. Kellas, Wheeling; George S. Kosar, Weirton; N. LeRoy Lapp, Morgantown; Mary Lou L. Lewis and William O. McMillan, Jr., Charleston; David Z. Morgan, Morgantown; Dennis S. O'Connor and John F. Otto, Jr., Huntington; Benjamin L. Plybon, Ronceverte; Edwin M. Shepherd, Charleston; L. Dale Simmons, Clarksburg; C. Carl Tully, South Charleston; Charles E. Turner, Huntington; J. Hugh Wiley, Morgantown; Joseph C. Woofter, Parkersburg; and R. James Yates, Beckley.

Medical Emergencies and Civil Defense

Donald R. Lantz, Parkersburg, Chairman; Adla Adi, Charleston; Aldolfo A. Andrada, Beckley; John V. Brannon, Bridgeport; Frederick M. Cooley and Henry R. Glass, Jr., Charleston; James C. Hazlett, Wheeling; Jules F. Langlet, Charles Town; and Jack Leckie, Huntington.

Medical Scholarships

Martha Jane Coyner, Harrisville, Chairman; R. L. Chamberlain, Buckhannon; Marshall J. Carper, South Charleston; John M. Daniel, Beckley; Thomas J. Holbrook, Huntington; Russel Kessel and Kenneth G. MacDonald, Charleston; John Mark Moore, Wheeling; and Clark K. Sleeth, Morgantown.

Mental Health

Roy A. Edwards, Jr., Huntington, Chairman; Mildred Mitchell-Bateman, Charleston; Randall Connolly, Vienna; David P. Hill, Wheeling; Florence K. Hoback, Huntington; Ralph S. Smith, Jr., Charleston; Demosthenes Soulis, Bluefield; and Stephen D. Ward, Wheeling.

Military Medical Affairs

Russel Kessel, Charleston, Chairman; Bert Bradford, Jr., Charleston; Robert D. Hess, Bridgeport; and Logan W. Hovis, Vienna.

Program

David F. Bell, Jr., Bluefield, Chairman; N. LeRoy Lapp, Morgantown; Tony C. Majestro, Charleston; Joseph A. Smith, Dunbar; Ralph S. Smith, Jr., Charleston; and Charles E. Turner, Huntington.

Public Service

C. R. Davisson, Weston, Chairman; Leonard M. Eckmann, South Charleston; Albert C. Esposito, Huntington; G. Thomas Evans, Fairmont; Louis W. Groves, Jr., Richwood; N. B. Groves, Martinsburg, E. Lee Jones, Wheeling; C. A. Logue, Morgantown; L. J. Pace, Princeton; Jack J. Stark, Belpre, Ohio; Stephen D. Ward, Wheeling; and A. J. Weaver, Clarksburg.

Resolutions

Richard E. Flood, Weirton, Chairman; George R. Callender, Jr., Charleston; William E. Gilmore, Parkersburg; Winfield C. John, Huntington; Worthy W. McKinney, Beckley; Joseph T. Skaggs, Charleston; and Harry S. Weeks, Jr., Wheeling.

Rural Health

N. Allen Dyer, Princeton, Chairman; Martha Jane Coyner, Harrisville; Harold D. Almond, Buckhannon; J. C. Arnett, Rowlesburg; Ralph H. Boone, Kingwood; B. S. Brake, Clarksburg; Robert W. Coplin, Elizabeth; Earl L. Fisher, Gassaway; Robert R. Frye, Mannington; O. M. Harper, Clendenin; Charles T. Lively, Weston; Ralph McGraw, Follansbee; and Charles J. Sites, Franklin.

Tuberculosis

Hugh S. Edwards, Beckley, Chairman; J. N. Aceto, Wheeling; Charles E. Andrews, Morgantown; Robert M. Biddle, Parkersburg; J. M. Brand, Chester; William L. Cooke, Dominic J. Gaziano and Ralph H. Nestmann, Charleston; Robert J. Reed III, Wheeling; Donald P. Stacks, Huntington; M. A. Viggiano, New Martinsville; James H. Walker, Charleston; and David H. Williams, Weirton.

Venereal Disease

N. H. Dyer, Charleston, Chairman; Donald E. Farmer, Charleston; Frank M. Peck, Huntington; David S. Pugh, Chester; Page H. Seekford, Charleston; Thomas L. Thomas, Wheeling; Lyle D. Vincent, Parkersburg; K. William Waterson, Wheeling; and Isaiah A. Wiles, Morgantown.

Special Committees

AMA-ERF

J. Keith Pickens, Clarksburg, Chairman; Irwin M. Bogarad, Weirton; Russell R. Brandon, Chesapeake, Ohio; Harry F. Cooper, Beckley; John E. Echols, Richwood; John H. Gile, Parkersburg; Joseph Gilman, Clarksburg; Robert W. Howes, Jr., Parkersburg; Joe N. Jarrett, Oak Hill; M. Bruce Martin, Huntington; William T. Lawson, Fairmont; Buford W. McNeer, Hinton; David Z. Morgan, Morgantown; Donald R. Roberts, Elkins; George A. Shawkey, Charleston; John W. Trenton, Kingwood; Lysle T. Veach, Petersburg; and E. Andrew Zepp, Martinsburg.

School Health

Thomas L. Thomas, Wheeling, Chairman; R. J. Bailey, Parkersburg; J. M. Brand, Chester; Hugh M. Brown, Clarksburg; Thomas G. Folsom, Barboursville; Peter A. Haley, Charleston; Grover C. Hedrick, Jr., Beckley; Robert G. Janes, Fairmont; Edward Shupala, Parkersburg and Eli J. Weller, Weirton.

WVU Liaison

Robert D. Hess, Bridgeport, Chairman; Kenneth J. Allen, Glen Dale; William E. Barnes, Parkersburg; Dewey F. Bensenhaver, Petersburg; Robert W. Bess, Jr., Piedmont; R. S. Birckhead, Gauley Bridge; W. T. Booher, Jr., Wellsburg; K. Douglas Bowers, Jr., Morgantown; A. Kyle Bush, Philippi; Terrell Coffield, New Martinsville; C. Richard Daniel Beckley; Del Roy R. Davis, Kingwood; G. Thomas Evans, Fairmont; Donald E. Farmer, Charleston; Richard E. Flood, Weirton; John M. Grubb, Pt. Pleasant; Carl B. Hall, Charleston; J. C. Huffman, Buckhannon; Joe N. Jarrett, Oak Hill; Ray M. Kessel, Logan; Kenneth G. MacDonald, Charleston; Charles H. McKown, Jr., Huntington; Ross E. Newman, Mullens; Robert R. Pittman, Martinsburg; Russell A. Salton, Williamson; Robert G. Shirey, Lewisburg; L. Dale Simmons, Clarksburg; John W. Traubert, Morgantown; A. J. Villani, Welch; David E. Wallace, Madison; Deleno H. Webb III, Huntington; and J. Hugh Wiley, Morgantown.

CME Membership Requirement Under Committee Study

Initial steps pointed toward a continuing medical education requirement for membership in the West Virginia State Medical Association were considered by the Executive Committee, Council and House of Delegates of the Association during the August 18-21 Annual Meeting at The Greenbrier.

The House referred to the Executive Committee for further study a recommendation from an Ad Hoc Committee that requirements for receipt of the Physician's Recognition Award granted by the American Medical Association be adopted for continued membership in the State Medical Association.

"This requirement should be announced, but not implemented until 1980, thus giving the members the necessary time to comply," the report offered by Drs. William E. Gilmore of Parkersburg, Robert D. Hess of Bridgeport and N. LeRoy Lapp of Morgantown proposed.

The Ad Hoc Committee was appointed by then President Jack Leckie of Huntington at the May 16 Council meeting in Charleston. Its recommendation was received by the Executive Committee at the Greenbrier and referred to Council, which accepted it with direction that it be forwarded to the House of Delegates for consideration.

The House action referring the recommendation back to the Executive Committee for additional study was based on several factors, including a necessity for developing an administrative mechanism for implementing the CME membership requirement; and a realization that appropriate amendments to the Association's Bylaws dealing with membership would have to be developed for House approval.

Discussion on the House floor also emphasized the desirability and need of informing the entire Association membership of the proposal through such channels as *The Journal* and other communications resources available to the Association leadership.

In the left photo, Dr. John F. Otto, Jr., of Huntington (left), and Harry A. Stansbury, Jr., Ph.D., of Charleston, Director of the West Virginia Comprehensive Health Planning Agency, chat with Dr. Tenley E. Albright of Boston, prior to Doctor Albright's address during opening exercises of the State Medical Association's 109th Annual Meeting. On the right, two of the speakers for the first general scientific session are shown with the moderator, Dr. N. LeRoy Lapp of Morgantown (right). They are Drs. Richard B. Hornick of Baltimore (left) and Eugene J. Linberg of Naples, Florida.

Journal Readership Survey Brings Comments, Ideas

West Virginia's physicians like their *Medical Journal*—and they read it—but they have numerous ideas about how its appearance and contents might be improved.

That's a concise summary of results of a recent *Journal* readership survey which drew some 411 replies, or about a 25-per cent response from those from whom reactions and suggestions reasonably could be expected.

Eighty-two of those responding said they read the *Journal* in its entirety, with only 11 saying they read it "not at all." A group of 120 reported reading 75 per cent of the *Journal* contents; 113 put themselves in the 50-per cent category, and 85 said they read 25 per cent of the material.

Replies to the survey cut across 20 medical specialties, with 47 individuals not indicating their fields of practice. There were fewer than half a dozen suggestions to discontinue the *Journal*, with other general comments, offered apart from suggestions for improvement, including these:

"Not a bad Journal;" "it serves its purpose well;" "the Journal is steadily improving;" "all is well done;" "covers West Virginia medical news very well;" "excellent job;" "just fine—does what it should do;" "generally a well balanced publication;" "well edited—good Journal;" "President's Page more religious than scientific;" "edit!"

Those sections, or parts, of the *Journal* most read, according to the survey, are—in this order—scientific articles; special articles; editorials; the President's Page; West Virginia University Medical Center News; general news; continuing education items; obituaries, and Grand Rounds.

Mrs. Joe N. Jarrett of Oak Hill and Charles R. Lewis, Executive Secretary of the State Medical Association, examine the text of a history of the Woman's Auxiliary to the State Medical Association which has been developed by Mrs. Jarrett. The Publication Committee, during the 109th Annual Meeting of the State Medical Association, voted to request Council to allocate funds to print 1,000 copies of the history.

Those responding to the survey indicated they pay the least overall attention to annual and other reports; the Month in Washington page (which was dropped by the *Journal* some months ago and also discontinued by the American Medical Association, its author); and county society news.

The Month in Washington has been replaced by a Third Party News, Views and Program Concerns page designed as a communications vehicle between state government and other health care programs, and physicians providing services under those programs.

The Medical Association's Publication Committee, which is responsible for the *Medical Journal,* and the administrative staff currently are sifting through more than 50 individual suggestions, or combinations of closely related ideas, for *Journal* improvement.

Particular attention likely will first be directed toward more case reports, and reports on clinical pathology conferences; better coverage of medico-economic-legal issues affecting West Virginia physicians practicing in the State; development of introductory abstracts for scientific articles; and improved coverage of medical education needs as identified by medical audit and/or professional standards review activities.

What was the Publication Committee's reaction to the survey and its results?

Most worthwhile, the Committee decided at its August 20 meeting in White Sulphur Springs, both from the insight it provided into how physicians view the *Journal*—and particularly with regard to the substantial number of suggestions for improvement.

1977 Ophthalmology-Otolaryngology Spring Meeting Announced

The National Spring Meeting of the West Virginia Academy of Ophthalmology and Otolaryngology will be held April 24-27, 1977, at The Greenbrier in White Sulphur Springs.

Speakers for the ophthalmology section will include Drs. S. Arthur Boruchoff, Boston; Stuart I. Brown, Pittsburgh; Richard H. Keates, Columbus, Ohio; George W. Weinstein, San Antonio, Texas; and Bruce E. Spivey, San Francisco.

The otolaryngology speakers will be Drs. James A. Crabtree and Paul H. Ward, both of Los Angeles; Alan M. Nahum, San Diego, California; and Fred D. Owens, Dallas.

The registration fee will be $175. Checks should be made payable to the West Virginia Academy of Ophthalmology and Otolaryngology and addressed to J. Elliott Blaydes, Jr., M. D., The Blaydes Clinic, Corner of Frederick and Woodland, Bluefield 24701.

Continuing Education Activities

Here are the continuing medical education activities listed primarily by the West Virginia University School of Medicine for part of 1976, as compiled by Dr. N. LeRoy Lapp, Assistant Dean for Continuing Education. The schedule is presented as a convenience for physicians in planning their continuing education program. (Other national, state and district medical meetings are listed in the *Medical Meetings* Department of *The Journal.*)

The program is tentative and subject to change. It should be noted that weekly conferences also are held on the Charleston and Wheeling campuses as well as in Morgantown. Further information about these may be obtained from: Division of Continuing Education, WVU Medical Center, P. O. Box 2867, Charleston 25330; Office of Continuing Medical Education, WVU Medical Center, Morgantown 26506; or, Office of Continuing Medical Education, Wheeling Division, WVU School of Medicine, Ohio Valley Medical Center, 2000 Eoff Street, Wheeling 26003.

Oct. 1, 2	Cardiology Teaching Day	Morgantown
Oct. 1, 2	Neurosciences Teaching Day	Morgantown
Oct. 15	Seminar in Medicine in Honor of Edmund B. Flink	Morgantown
Oct. 17-23	Family Practice Review	Lexington, Ky.
Oct. 22	Jackson General Hospital Visiting Physician Program	Ripley
Oct. 22, 23	W. Va. Chapter, American College of Surgeons, and Dept. of Surgery, Continuing Education Program	Morgantown
Oct. 28	Stonewall Jackson Memorial Hospital Visiting Physician Program	Weston
Oct. 30	Biofeedback Seminar in Physical Therapy—WV Assn., Inc.	Morgantown
Oct. 30	Critical Care Medicine	Morgantown
Nov. 4	Family Practice Day	Wheeling
Nov. 12	Jackson General Hospital Visiting Physician Program	Ripley
Nov. 13	Cardiology for the Primary Care Physician	Charleston
Nov. 18	Stonewall Jackson Memorial Hospital Visiting Physician Program	Weston
Nov. 18, 19	Practical Fluid and Electrolyte Therapy	Morgantown
Dec. 1	Pediatric Day—Current Problems in Adolescence	Morgantown
Dec. 1-3	Percutaneous Techniques Cosponsored by the Joint Socio-Economics CME Subcommittee and the Congress of Neurological Surgeons	Morgantown

Constitution, Bylaws Changes Adopted By Delegates

The West Virginia State Medical Association's House of Delegates adopted two amendments to the Association's Constitution and another two to the Bylaws during business sessions held as a part of the August 18-21 Annual Meeting at The Greenbrier.

Another constitutional change introduced this year, and designed to clarify procedures for choosing certain Association officers, will be up for consideration at the 1977 meeting.

Adoption of one constitutional amendment removed some prior inconsistencies by specifically providing that the Association Past President three years removed shall serve as Junior Councilor-at-Large with a vote at Council meetings.

The second accepted constitutional change, and an accompanying Bylaws amendment, set up a new membership category for retired physicians. This means that the Association membership now includes active, honorary and retired members.

The other approved Bylaws amendment increased from $6 to $12 an annual allocation from membership dues for medical scholarships. This followed House action of a few years ago which increased from two to four the number of four-year scholarships the Association grants annually to first-year medical school students.

Active membership in the Association embraces physicians practicing medicine in the State, including those who are temporarily absent by reason of serving a residency or absent for a tour of duty with the nation's Armed Forces.

Here is the new Bylaws language relative to honorary and retired membership:

"The honorary membership of this Association shall consist of those physicians who have attained outstanding eminence in the medical profession; have been nominated for honorary membership by their component societies; and have been elected to

such membership by a majority vote of the Council and the House of Delegates of the Association.

"The retired membership of this Association shall consist of those physicians who have been active members of a state medical association for twenty-five (25) or more consecutive years; and who have retired from professional activity. Nominations for this category shall be forwarded by the appropriate component societies to the Executive Secretary for submission to Council for election.

"Honorary and retired members shall be exempt from the payment of dues or assessments. They shall have the privilege of the floor in any open session of the Association, but shall not have the right to make or second motions, to vote, or to hold any elective office in this Association, except that they may hold elective or appointive committee membership."

Here is the constitutional amendment to come up for action in 1977, with changes or additions relative to current language in italics:

PROPOSED AMENDMENT TO THE CONSTITUTION

(To Be Acted Upon Finally
At the First Session of the House of Delegates
During the 1977 Annual Meeting)

Amend Article IX, Sections 1, 2, 3 and 4, to read as follows:

Sec. 1. The officers of this Association shall be a President, a President Elect *who shall automatically succeed to the office of President,* a Vice President, an Executive Secretary, a Treasurer, fifteen Councilors to be elected as provided in Section 2 of this Article, and *three* Councilors-at-Large, who shall be the retiring president and his *two immediate predecessors.*

Sec. 2. The officers, except *hold-over Councilors, the President and the Executive Secretary,* shall be elected annually. The terms of the Councilors shall be for two years, one from each Councilor District being elected by the House of Delegates every second year as shall be provided for in the Bylaws for reapportionment of Council Districts. No Councilor shall be eligible to succeed himself after four years, as Councilor, but he may be elected after two years' absence from the Council. All these officers shall serve until their successors are elected and installed.

The term of the President, President Elect, Vice President, and Treasurer elected at the annual meeting in 1956 shall begin on January 1, 1957, and end on the last day of the annual meeting in that year. Thereafter, the term of the elective officers, except members of the Council, shall be for the period of one year beginning with the installation of the President at the final session of the House of Delegates at each annual meeting.

The term of office of Councilors shall be for a period of two years beginning with the installation of the incoming President and ending on the last day of the second succeeding annual meeting, except as provided in the bylaws pertinent to reapportionment of Councilor Districts.

Sec. 3. The President Elect, Vice President, *Treasurer and Councilors in those districts where two-year terms expire* shall be elected by the House of Delegates at each annual meeting.

Two of the speakers for the second general scientific session during the State Medical Association's 109th Annual Meeting are shown in the left photo with the moderator, Dr. Herbert H. Pomerance of Charleston (right). They are Drs. William A. Neal of Morgantown (left) and Thomas H. Joyce III of Cincinnati. The third speaker for the second scientific session, Dr. Philip R. Nader of Galveston, Texas, is shown in the right photo (center). He is talking with Drs. Phillip W. Hall of Clarksburg (left) and W. Gene Klingberg of Morgantown during a coffee break held in the Association's scientific exhibit center.

Sec. 4. The retiring President shall be Chairman of the Council for the year following his term of office, and shall then serve another *two years* as Councilor-at-Large. Thereafter he shall be eligible for election to any office of the Association except President Elect or Vice President.

(Adoption of this amendment is necessary to clarify procedure for the President Elect to advance to the Presidency; for election of Councilors; and remove other present inconsistencies between the Constitution and Bylaws relative to the Junior Councilor and Executive Secretary.)

Doctor Mou Named Dean, Charleston Division, WVU Medical Center

A Philadelphia-born physician with a wide experience in academic administration in the health sciences has been appointed Dean of the Charleston Division, West Virginia University Medical Center.

Thomas W. Mou, M. D.

The selection of Dr. Thomas William Mou, Associate Chancellor for the Health Sciences for the State University of New York Central Administration, was announced by Dr. James G. Harlow, President of WVU. Doctor Mou will also serve as Professor of Medicine and Community Medicine.

The WVU Medical Center's Charleston Division is associated with the Charleston Area Medical Center. It now provides clinical training for a selected number of fourth-year medical students as well as postgraduate training. Added recently to the educational curricula of the Division was a B. S. degree program for registered nurses.

Full implementation awaits the completion of the WVU Health Sciences and Education Building now being constructed adjacent to the CAMC's Memorial Division. When completed, the building will serve approximately 100 third and fourth-year medical students as well as dental, pharmacy and nursing students. It will house faculty offices, a 300-seat auditorium and a regional medical library. Classrooms and facilities will be used by students in several areas of the health sciences as well as for continuing education and postgraduate training.

Doctor Mou received his B. S. degree in Bacteriology at the Philadelphia College of Pharmacy and Science after which he served four years in the Medical Administration Corps and Sanitary Corps of the United States Air Force.

Following his separation from the service, he enrolled in the University of Rochester School of Medicine and Dentistry from which he was graduated in 1950. His internship and residency in internal medicine were served at the same institution and were followed by postgraduate study in medicine and infectious diseases as a Public Health Service Fellow at Harvard Medical School.

He began his association with State University of New York at its Upstate Medical Center in Syracuse in 1956, when he was named Assistant Professor of Preventive Medicine following two years as an Instructor in Medicine and Bacteriology at the University of Rochester School of Medicine.

In December, 1970, he was named university Dean and Provost for the Health Sciences for the State University of New York system and was recently elevated to the position of Associate Chancellor.

Doctor Mou is a member of the Infectious Disease Society of America, the American Federation for Clinical Research, the Association of Academic Health Centers and the New York Academy of Sciences.

He is the author or co-author of more than 30 publications which describe his research in infectious diseases and the use and efficiency of various antibiotics as well as his studies on model health care, health science planning and administrative programs.

MU Family Care Center Receives Gifts Totalling $350,000

Gifts from two foundations totalling $350,000 recently were made to the Family Care Outpatient Center, an affiliate of the Marshall University School of Medicine in Huntington.

Paul R. Jenkins, Executive Vice President of the Claude Worthington Benedum Foundation, announced a $250,000 grant has been approved by that organization. Following his announcement, Harold E. Burdick, President and Publisher of the Huntington Publishing Company newspapers, reported a $100,000 contribution from the Frank E. Gannett Newspaper Foundation. The Huntington newspapers are members of the Gannett Co., Inc.

The Benedum contribution is the largest single gift in Marshall's history, Marshall University President Robert B. Hayes noted, and the Gannett donation brings to $280,000 the amount given to Marshall by that foundation over the past three years.

The announcements by the Benedum and Gannett foundations bring to $650,000 the amount raised in the effort to develop Family Care Outpatient Center as an integral element of the Marshall Medical School. Earlier, Ashland Oil, Inc., and Huntington Alloys, Inc., each announced $150,000 contributions to the project.

Family Care Outpatient Center is being developed in the former Doctors' Memorial Hospital at 1801 Sixth Avenue to provide non-emergency medical

service to the community and to serve needs of the medical school in several ways.

In addition to providing space for medical school offices, classrooms and laboratories, it will offer opportunities for medical students to work directly with patients early in their medical education program. It also will provide for clinical practice by medical school faculty members in line with their work with students.

The center currently is offering outpatient service to the community from 8 A.M. to 8 P.M. seven days a week.

Anonymous Gift Of $1,000

It also was announced that a couple from Kentucky has paid what they consider "a debt of gratitude to the Huntington medical community" with a $1,000 gift to the Marshall University School of Medicine.

The gift is their way of saying thank you for services performed by a Huntington physician, according to Paul H. Collins, Marshall's Assistant to the President for Medical School Affairs. The physician performed surgery on the man's wife about 10 years ago.

The couple prefers to remain anonymous, Collins said.

November ACP Regional Meeting To Be Held In Pittsburgh

The Western Pennsylvania and West Virginia Regional Meeting of the American College of Physicians will be held November 12-13 in Pittsburgh.

Specialists in internal medicine and related fields will participate in the two-day scientific meeting.

Physicians who attend the regional meeting are eligible for credit toward the American Medical Association Physician's Recognition Award in Category 1.

For additional information contact Dr. John B. Hill, 465 Woodland Hills, Pittsburgh, Pennsylvania 15235.

Doctor Mufson Assumes Chairman Of Medicine Post At MU

Dr. Maurice A. Mufson recently assumed duties as Chairman of the Department of Medicine at the Marshall University School of Medicine.

Doctor Mufson, whose appointment was announced last spring, formerly was a professor at the University of Illinois College of Medicine and a staff member of Chicago's West Side Veterans Administration Hospital. He was Associate Chief of Staff Research and Education at the Chicago WSVA Hospital. He served at the University of Illinois as Professor of Medicine, Preventive Medicine and Community Health; and was Professor of Epidemiology in the college's School of Public Health.

Maurice A. Mufson, M. D.

He is a Fellow of the American College of Physicians.

Doctor Mufson, 43, a New York City native, earned a baccalaureate degree in chemistry from Bucknell University and his M. D. degree from New York University College of Medicine.

After a medical internship at New York's Bellevue Hospital, he served as Assistant Resident Physician there, and then was Chief Resident Physician at Cook County Hospital in Chicago.

Doctor Mufson served on the clinical medicine faculty at George Washington University's School of Medicine from 1962 through 1965 and worked with the Laboratory of Infectious Diseases of the National Institutes of Health, Bethesda, Maryland, from 1961 through 1965. He then joined the University of Illinois faculty.

Dr. Richard W. Moriarty of Pittsburgh (left), one of the speakers for the third general scientific session during the State Medical Association's Annual Meeting, is shown in the left photo with Dr. Richard E. Flood of Weirton, who was the moderator and also a speaker for the third session. Other speakers for that session were Dr. Thomas L. Stern of Kansas City, Missouri, shown in the center photo with Mrs. Stern; Elizabeth A. O'Connell, R. N., of Morgantown, shown in the right photo with Dr. Isaiah A. Wiles, also of Morgantown; and Dr. George R. Callender, Jr., of Charleston (not shown).

Doctor Mufson was an attending physician at both the Cook County Hospital in Chicago and the University of Illinois Hospital.

A participant in several national and international symposiums, he received a World Health Organization Exchange of Research Worker grant in 1967. A Diplomate of the National Board of Medical Examiners, he served on the Chicago Medical Society's Committee on Postgraduate Education, Division of Internal Medicine. West Side Hospital's 1972 "Outstanding Professional Employee," Doctor Mufson has been a member of the VA's Central Office Council for Academic Affairs since 1973.

A member of numerous professional organizations, he also has had more than 70 articles and nearly two dozen abstracts published in professional journals. He serves on the Editorial Board of the *Journal of Clinical Microbiology* and on the Publications Committee of the Tissue Culture Association.

Doctor and Mrs. Mufson are the parents of three children.

Psychiatric Association Meeting Scheduled In Grafton

The fall meeting of the West Virginia Branch, American Psychiatric Association, will be held on October 16 at the Tygart's Lake Lodge in Grafton.

The topic for the afternoon conference, beginning at 2 o'clock, will be "Biofeedback." Speakers will include several physicians from the Department of Behavioral Medicine at the West Virginia University School of Medicine.

A social hour and dinner will follow the scientific session.

Additional Speakers Announced For Mid-Winter Conference

A number of additional lecturers for the Tenth Mid-Winter Clinical Conference have been announced by the Program Committee. The annual continuing medical education event, sponsored by the State Medical Association in conjunction with other medical groups and volunteer health agencies,

George J. Hill II, M. D.

Robert W. Coon, M. D.

will be held in Charleston next January 28-30 at the Daniel Boone Hotel.

The Program Committee announced that a panel discussion on the medical and surgical management of gastrointestional bleeding will constitute the morning session on Saturday, January 29.

The speakers will be Drs. George J. Hill II, Professor and Chairman of Surgery and Associate Dean of the Marshall University Medical School; Thomas E. Chvasta, Department of Internal Medi-

The Publication Committee of the State Medical Association (left photo) met during the Association's Annual Meeting. Seated are Drs. Thomas J. Holbrook of Huntington (left), Associate Editor of The West Virginia Medical Journal, and Stephen D. Ward of Wheeling. Doctor Ward was elected by the Committee as Editor of The Journal and Publication Committee Chairman, succeeding the late Dr. George F. Evans of Clarksburg who had resigned because of illness (see story and editorial in this issue of The Journal). Standing (from left) are Drs. Joe N. Jarrett of Oak Hill, Vernon E. Duckwall, Elkins; and John M. Hartman, Charleston, Associate Editors. Not shown is Dr. Edward J. Van Liere of Morgantown, Associate Editor. In the right photo, Dr. Donald P. Brown of Kingwood (left) and Mrs. Brown get acquainted with Dr. Richard E. Palmer of Alexandria, Virginia, President of the AMA, who addressed the first session of the House of Delegates at the Annual Meeting.

cine, Gastroenterology, Wheeling Clinic; and Johnsey L. Leef, Jr., Charleston radiologist. The moderator will be Dr. James Boland, Professor and Chairman of Surgery, Charleston Division, West Virginia University Medical Center.

Speakers also were announced for the Saturday night dinner session and for Sunday morning, January 30.

Dr. Robert W. Coon, Dean of the Medical School and Vice President for Health Services at Marshall University, will be the Saturday dinner speaker. Doctor Coon formerly was Vice Chancellor for Health Education for the West Virginia Board of Regents in Charleston.

The dinner session will be sponsored by the conference in lieu of the traditional Saturday-night dinner dance of the Kanawha Medical Society which has been scheduled for another week end next year.

Lecturing Sunday morning will be Drs. Irvin M. Sopher of Charleston, Chief Medical Examiner for the State of West Virginia; and John A. Goree of Durham, North Carolina, Professor of Radiology and Chief, Section of Neurology Radiology, Duke University Medical Center.

It was announced previously that Dr. James R. Hodge, Akron (Ohio) psychiatrist, will speak on Sunday morning.

George J. Hill II, M. D.

Doctor Hill, a native of Cedar Rapids, Iowa, received his A.B. degree from Yale in 1953 and his M.D. degree from Harvard in 1957, attending both universities as a scholarship student. Following an internship in surgery at the New York Hospital-Cornell Medical Center, he returned to Harvard and the Peter Bent Brigham Hospital for further training in surgery, completing his senior residency in 1966. During the period of his graduate training at Harvard he also served as a freshman advisor at Harvard College and as a teaching fellow in the Department of Anatomy.

Doctor Hill joined the faculty at the University of Colorado Medical School in Denver in 1967, rising in rank from Instructor to Associate Professor. In 1973, he was called to St. Louis as Professor of Surgery at Washington University, a position which he held until earlier this year, when he accepted his present post. He is the author of two books and more than 70 other scientific publications, mainly in the fields of cancer and surgery.

Doctor Hill, active in Scouting since childhood, is an Eagle Scout, a member of the Order of the Arrow, and a member of the National Exploring Committee of the Boy Scouts of America. He served in the Marine Corps Reserve from 1950 to 52, and was on active duty as a Commissioned Officer in the U.S. Public Health Service at the National Institutes of Health from 1961 to 1963.

Doctor Hill is married to the former Helen Zimmerman, who is a graduate of Smith College. Mrs. Hill received her Ph.D. from Brandeis and is now Associate Professor of Cell Biology and Biochemistry at Marshall University School of Medicine. The Hill's have four children.

Other Program Information

Other general subject areas for the conference will include acute thoracic problems Saturday afternoon and, as announced previously, sports medicine during the Friday afternoon (January 28) physician's session and for the general public Friday evening.

The emphasis for the sports medicine program will be on efforts needed to reduce athletic injuries on the junior high and high school levels, and will be oriented to primary care as well as orthopedic physicians. Coaches and trainers will be invited to attend, and also participate in, both the physician and public sessions.

Points of discussion are expected to include the need for proper physical examinations, the use and mis-use of drugs for athletes, and treatment of specific athletic injuries.

Serving on the Program Committee are Drs. Ralph H. Nestmann and Joseph T. Skaggs of Charleston, Co-Chairmen; and William O. McMillan, Jr., of Charleston, and C. Carl Tully of South Charleston.

Attendance at the conference will be acceptable for Category 1 credit toward the Physician's Recognition Award for the American Medical Association; and the conference also is expected to carry prescribed credit by the American Academy of Family Physicians.

A registration fee of $20 for the entire conference, including the dinner, will be charged to all registrants except nurses, medical students, interns and residents. Dinner tickets for the latter participants, spouses and other guests will be available at the registration desk.

Further details, including additional conference speakers, will be provided in later issues of *The Journal* as the program is completed.

State Physicians Elevated By Specialty Groups

Five state physicians who have been elected to Fellowship or similar standing in their national specialty organizations recently have been reported to the *Journal*.

Drs. John L. Minard of Elkins and James M. Stevenson of Charleston have been named Diplomates of the American Board of Psychiatry and Neurology, Inc. (both in psychiatry).

Drs. Maria T. Georgiev and Stafford G. Warren, both of Charleston, have been granted Fellowship in the American College of Cardiology.

Dr. Saeed Mahmoodian of Clarksburg has been elected to Fellowship in the American College of Obstetricians and Gynecologists.

Dr. Robert H. Waldman Heads WVU Department Of Medicine

The former Chief of the Division of Infectious and Immunologic Diseases at the University of Florida College of Medicine has been named Professor and Chairman, Department of Medicine, West Virginia University School of Medicine.

Robert H. Waldman, M. D.

Robert H. Waldman, M. D., succeeds Edmund B. Flink, M. D., who resigned the Chairmanship of the Department of Medicine to devote full time to teaching.

Doctor Waldman, who also has served recently as Acting Chairman of the Department of Medicine at the University of Florida, was born in Dallas, Texas, and completed his undergraduate study at Rice Institute in Houston.

He was graduated from Washington University Medical School in St. Louis. Following his postgraduate training in internal medicine at Osler Medical Service of Johns Hopkins University Hospital in Baltimore, he was a clinical associate at the National Institute of Allergy and Infectious Diseases in Bethesda, Maryland; and a postdoctoral Fellow in the Department of Microbiology, University of Florida. He joined the faculty of that institution in 1968.

He is a member of Alpha Omega Alpha, honor medical society; the American Society for Clinical Investigation, the American Federation for Clinical Research, the American Association of Immunologists, the Southern Society for Clinical Investigation, the Indian Science Congress, the American Society for Microbiology, the Reticuloendothelial Society and the American Thoracic Society. He is a Fellow of the American College of Physicians and a Diplomate of both the American Board of Internal Medicine and the American Board of Allergy.

He is one of four authors of a recently published book, *The Immunological Response of the Female Reproductive System*, and has written or assisted in writing more than 100 papers and chapters describing research on immunology and infectious diseases.

Dr. David F. Bell, Jr. To Head 1977 Program Committee

Dr. David F. Bell, Jr., of Princeton has been named by the President, Dr. John J. Mahood, to serve as Chairman of the Program Committee for the West Virginia State Medical Association's 110th Annual Meeting at The Greenbrier, August 24-27, 1976.

Other committee members are Drs. N. LeRoy Lapp of Morgantown, Tony C. Majestro and Ralph S. Smith, Jr., of Charleston, Joseph A. Smith of Dunbar and Charles E. Turner of Huntington.

The committee held its initial meeting at The Greenbrier on August 20.

Two State Ophthalmologists Serve As Instructors

Two West Virginia ophthalmologists were chosen to give postgraduate courses at the annual meeting of the American Academy of Ophthalmology in Las Vegas, Nevada, October 3-10.

Dr. Albert C. Esposito of Huntington was to present a course in "Ocular Surgery and Anesthesia," and Dr. J. Elliott Blaydes, Jr., of Bluefield, a course in "Ocular Suture Techniques and Needles."

Doctor Esposito, a Past President of the State Medical Association, currently is President of the American Association of Ophthalmology. He is a member of the West Virginia House of Delegates from Cabell County.

Doctor Blaydes has served for many years as Secretary-Treasurer of the national meeting of the West Virginia Academy of Ophthalmology.

Outpatient Pain Clinic Referral Service Started At WVU

The Department of Anesthesiology at the West Virginia University Medical Center has initiated an Outpatient Pain Clinic for the diagnosis and treatment, including nerve blocks, of acute and chronic pain problems.

There were 212 patient visits to this clinic from July 1, 1975, through June 30 of this year. Referrals for this service can now be accepted from West Virginia physicians. Contact Dr. Richard B. Knapp, Professor and Chairman, Department of Anesthesiology, or Dr. R. Graybill Johnston, at 293-5411.

Virginia Hospital Schedules Speaker On Biofeedback

The Annual Fall Conference of Saint Albans Hospital in Radford, Virginia, will be held on October 8.

Dr. Raeford Williams, Director of the Clinical Biofeedback Laboratory at Duke University Hospital, will speak on "Biofeedback: Advances and Limitations." He will discuss the application of biofeedback to hypertension and other somatic illnesses.

There will be no fee.

For further information contact George K. White, Administrator, Saint Albans Psychiatric Hospital, Radford, Virginia 24141 (telephone 703/639-2481).

Mrs. J. L. Mangus Installed As Auxiliary President

Mrs. J. L. Mangus of Charleston assumed the Presidency of the Woman's Auxiliary to the West Virginia State Medical Association at the group's 52nd Annual Meeting at The Greenbrier in White Sulphur Springs, August 18-21.

Mrs. Mangus was installed by Mrs. Norman H. Gardner of East Hampton, Connecticut, President of the Woman's Auxiliary to the American Medical Association, who was an honor guest.

Also attending as an honor guest was Mrs. Gordon Dees of Jackson, Mississippi, President of the Woman's Auxiliary to the Southern Medical Association.

Mrs. Mangus, whose husband is a family physician and Medical Director of the Division of Medical Care, West Virginia Department of Welfare, succeeded Mrs. Robert R. Weiler of Wheeling. The Auxiliary elected Mrs. J. T. Mallamo of Fairmont as President Elect; and the following additional officers:

Mrs. Robert J. Reed III of Triadelphia, Vice President; Mrs. D. Sheffer Clark, Huntington, Recording Secretary; Mrs. Thomas J. Janicki, Charleston, Corresponding Secretary; Mrs. Charles S. Harrison, Clarksburg, Treasurer; and Mrs. M. Bruce Martin, Huntington, Parliamentarian;

Mrs. Harry S. Weeks, Jr., Wheeling, Northern Regional Director; Mrs. Charles E. Andrews, Morgantown, Eastern Regional Director; Mrs. Gary G. Gilbert, Huntington, Western Regional Director; Mrs. T. Keith Edwards, Bluefield, Southern Regional Director; and Mrs. Joseph A. Smith, Dunbar, Central Regional Director.

Mrs. J. L. Mangus

Committee Appointments

Mrs. Mangus also announced these appointments of Committee Chairmen:

Mrs. J. T. Mallamo, Fairmont, Bank Project Chairman; Mrs. Joseph Gilman, Clarksburg, AMA Education and Research Foundation; Mrs. Richard

New officers of the Woman's Auxiliary to the West Virginia State Medical Association, elected during the group's 52nd Annual Meeting at The Greenbrier in White Sulphur Springs, August 18-21, are, first row, Mrs. J. T. Mallamo (left), Fairmont, President Elect; and Mrs. J. L. Mangus, Charleston, President; second row (from left), Mrs. Charles S. Harrison, Clarksburg, Treasurer; Mrs. Robert J. Reed III, Triadelphia, Vice President; and Mrs. D. Sheffer Clark, Huntington, Recording Secretary; third row (from left), Mrs. Charles E. Andrews, Morgantown, Northern Regional Director; Mrs. Gary G. Gilbert, Huntington, Western Regional Director; Mrs. T. Keith Edwards, Bluefield, Southern Regional Director; Mrs. Harry S. Weeks, Jr., Wheeling, Northern Regional Director; and Mrs. Joseph A. Smith, Dunbar, Central Regional Director. Not shown are Mrs. Thomas J. Janicki, Charleston, Corresponding Secretary; and Mrs. M. Bruce Martin, Huntington, Parliamentarian.

G. Starr, Beckley, Archives and History; Mrs. William T. Lawson, Fairmont, Bylaws and Handbook; Mrs. A. G. Capinpin, Charleston, Convention Chairman; Mrs. Robert E. O'Connor, Charleston, Convention Co-Chairman; Mrs. Robert G. Janes, Fairmont, Cook Book; Mrs. Alfred J. Magee, Charleston, Editor, State News Bulletin; Mrs. Thomas R. Poole, Charleston, Circulation Manager, News Bulletin; Mrs. J. Dennis Kugel, Charleston, Finance;

Mrs. E. Steven Friera, Romney; Mrs. Harry E. Coffman, Keyser, and Mrs. J. T. Mallamo, Fairmont, Health Careers Fund; Mrs. W. A. Thornhill, Jr., Charleston, Communications; Mrs. E. M. Spencer, Bluefield, Health Committees; Mrs. John A. B. Holt, Charleston, Legislation; Mrs. Robert D. Hess, Bridgeport, Necrology; and Mrs. John E. McKenzie, Beckley, Press and Publicity.

Mrs. Mangus A Musician

Mrs. Mangus, the mother of three children, was born and educated in Pittsburgh. She received her bachelor's degree in Music Education from Mount Union College in Alliance, Ohio, and a master's degree in Music Education from West Virginia University. She also has taken courses at Juaniata College in Huntington, Pennsylvania; at Carnegie Mellon University in Pittsburgh, and at Marshall University.

Mrs. Mangus, who gives private piano lessons, has taught junior and senior high music and directed a church choir.

Active in community affairs, she is a Past President of the Women's Committee of the Charleston Symphony Orchestra, and is a member of the Bouchelle Garden Club and the Child Development Club in Charleston. She is a past regional board member of the West Virginia Mental Health Association.

Mrs. Mangus was President of the Kanawha County Auxiliary in 1967. In the State Auxiliary, she was Editor of the News Bulletin for two years, was Chairman of the Mental Health Committee and a regional director; and served as Treasurer for two years.

Medical Office Staff Course Planned In Charleston

A one-day workshop will be presented on November 12 at the Charleston House/Holiday Inn in Charleston for the purpose of training physicians' medical office staffs in appropriate business procedures. The workshop, entitled "Business Essentials For a Medical Office," is being presented by Practice Productivity Inc.

Practice Productivity is a national medical management consulting firm based in Atlanta. The workshop leaders are consultants specializing in the problems of the physician in private practice.

Physicians' office managers, receptionists, bookkeepers, and insurance clerks will benefit from these courses, as well as clinical personnel.

The registration fee is $60, and includes a luncheon and a comprehensive workbook as well as sample materials and work-saving forms.

Surgeons Schedule Scientific Meeting In Morgantown

A combined meeting of the West Virginia Chapter, American College of Surgeons, and the Department of Surgery of the West Virginia University School of Medicine will be held October 22-23, beginning on Friday, October 22, at the WVU Medical Center auditorium in Morgantown.

The meeting will begin with registration at 8:30 A. M., followed by a welcome from John E. Jones, M. D., Dean of the WVU School of Medicine.

The speakers and their topics for the scientific program on Friday will include:

"Current Diagnosis, Importance and Treatment of Lipid Abnormalities"—Margaret J. Albrink, M. D., Professor of Medicine; "Stress Testing"—Abnash C. Jain, M. D., Associate Professor of Medicine; "Collateral Circulation in Corornary Artery Disease"—Allen F. Bowyer, M. D., Professor of Medicine;

"Anesthesia for Cardiac Surgery" — Richard Knapp, M. D., Professor and Chairman, Department of Anesthesiology; "Atrial Myxoma—Surgical Implications"—Robert J. Gardner, M. D., Professor of Surgery; "Surgery in Patients with Prior Open Heart Procedures"—Thomas J. Tarnay, M. D., Professor of Surgery;

"Coronary Artery Surgery"—John Wauldhausen, M. D., Professor and Chairman, Department of Surgery, The Milton S. Hershey Medical Center, Pennsylvania State University; "Congenital Heart Disease — A Pathologist's Viewpoint" — Jesse J. Jenkins, M. D., Assistant Professor of Pathology; and "An Alternative Method for Correction of Sinus Venosus Defects"—Herbert E. Warden, M. D., Professor of Surgery.

A panel discussion by the above physicians, with the exception of Doctor Jenkins, will follow.

Dr. Alfred D. Ghaphery of Wheeling, President of the West Virginia Chapter, ACS, will be the luncheon speaker.

Dr. Alvin L. Watne, Chairman of the WVU Department of Surgery, will preside at the Friday program.

Saturday Program

Doctor Gardner, First Vice President of the West Virginia Chapter, ACS, will preside at the Saturday session to be held at the Lakeview Inn and Country Club near Morgantown beginning with registration at 8:30 A. M.

The speakers and their topics for the scientific program beginning at 9 A. M. will be "Congenital Heart Disease"—William A. Neal, M. D., Assistant Professor of Pediatric Cardiology; "Pediatric Cardiac Anesthesia"—Juan F. Gutierrez, M. D., Associate Professor of Anesthesiology; and "Advances in Pediatric Cardiac Surgery"—Doctor Waldhausen.

A panel discussion by Doctors Gutierrez, Jenkins, Neal, Waldhausen and Warden will follow.

Dr. George F. Evans, Journal Editor, Dies At Age 76

Dr. George F. Evans of Clarksburg, Editor of the *West Virginia Medical Journal* and a Past President of the West Virginia State Medical Association, died on August 25 in a Morgantown hospital. He was 76.

George F. Evans, M. D.

Doctor Evans, a native of St. Mary's, Ontario, Canada, had served as Editor of *The Journal*, and also Chairman of the Association's Publication Committee, since May, 1962.

An internist, Doctor Evans was a member of the Council of the State Medical Association from 1949 to 1952 and was the Association's President in 1958-59. He served one term in the House of Delegates of the American Medical Association.

Doctor Evans became a member of the Publication Committee in 1956.

See Editorial on Page 289

He received his M. D. degree from McGill University in Montreal, Canada, in 1923; and served an internship at City Hospital in Binghampton, New York, in 1923-25, and a residency at Union Hospital in Fall River, Massachusetts, in 1926.

Doctor Evans then became a member of the staff of Hopemont Sanitarium in Preston County, where he served as Medical Director and then Superintendent from 1929 to 1933. He was President of the Preston County Medical Society in 1931.

In 1934, Doctor Evans entered private practice in Clarksburg, and had remained there.

From 1949 to 1966, Doctor Evans served on the Medical Licensing Board of West Virginia, and was named Chairman of the Board in July, 1963. He also was a Past President of the West Virginia Tuberculosis and Health Association; and was a Fellow of the American College of Physicians and the American College of Chest Physicians.

In World War II, Doctor Evans served overseas in the U. S. Army Medical Corps for three years. He was honorably discharged with the rank of Lieutenant Colonel, and was decorated with the Legion of Merit for meritorious service in Algeria and Italy.

Doctor Evans was a Past President of the Harrison County Medical Society and the Potomac Chapter of the American College of Chest Physicians; and was a Director of the National Tuberculosis Association.

Throughout most of the period of its existence, Doctor Evans was on the Board of the Harrison County Tuberculosis Association and remained active in the successor organization to that group.

A member of Christ Episcopal Church in Clarksburg, he also was on the Board of the West Virginia Heart Association.

He is survived by his widow, Elah Pettit Evans; and two sisters, Mrs. Stanley Switzer of St. Mary's, Ontario, Canada; and Mrs. Harry A. Procter of Toronto, Canada.

Medical Meetings

Oct. 6-9—Maryland Medical Staff Conference, White Sulphur Springs.

Oct. 6-10—Am. Academy of Ophthal. & Otolaryn., Las Vegas.

Oct. 8—Fall Conference, Saint Albans Psychiatric Hospital, Radford, Va.

Oct. 8-9—Update '76 (Wheeling Clinic), Wheeling.

Oct. 9-14—Indiana State Medical Assn., Indianapolis.

Oct. 11-15—ACS, Chicago.

Oct. 12-14—Am. College of Emergency Physicians, New Orleans.

Oct. 16—Seminar on Urinary Tract Infections, Huntington.

Oct. 16—W. Va. Branch, Am. Psychiatric Assn., Grafton.

Oct. 16-17—Am. College of International Physicians, Inc., Chicago.

Oct. 16-21—Am. Academy of Pediatrics, Chicago.

Oct. 17-18—Am. College of Preventive Medicine, Miami Beach.

Oct. 22-23—W. Va. Chap., ACS; and Dept. of Surgery, WVU, Morgantown.

Oct. 24-26—Medical Society of the District of Columbia, White Sulphur Springs.

Oct. 24-28—Am. College of Chest Physicians, Atlanta.

Nov. 3-6—Am. Society of Cytology, Houston.

Nov. 4-7—Medical Society of Virginia, Williamsburg.

Nov. 7-10—Southern Medical Assn., New Orleans.

Nov. 12-13—Western Pa.-W. Va. Regional Meeting, ACP, Pittsburgh.

Nov. 15-19—Am. Heart Assn., Miami Beach.

Dec. 4-8—AMA Clinical, Philadelphia.

Dec. 5-9—Am. Academy of Dermatology, Chicago.

1977

Jan. 28-30—Tenth Mid-Winter Clinical Conference, Charleston.

April 24-27—W. Va. Academy of Ophthal. & Otolaryn., White Sulphur Springs.

Aug. 24-27—110th Annual Meeting, W. Va. State Medical Assn., White Sulphur Springs.

The West Virginia Medical Journal

Vol. 72, No. 11 November, 1976

Diagnosis And Treatment Of Benign Lesions In The Upper Urinary Collecting System

Tara C. Sharma, M. D.; Charles A. Hoffman, M. D.; Harold N. Kagan, M. D.; And Rafael E. Molina, M. D.

Abstract

Filling defects in the upper urinary systems can be due to a variety of causes. A classification is presented. An accurate diagnosis should be made using all the modalities at our disposal as far as possible to distinguish the benign from the malignant, and a medically treatable condition from a surgically remediable malady.

A plea is made for conservative approach towards possible benign lesions to salvage urinary tracts that otherwise might be radically extirpated. This can only be done if an attempt is made to keep all the lesions in mind during the work-up of a negative shadow.

The Authors

- **Tara C. Sharma, M. D.; Charles A. Hoffman, M. D.; Harold N. Kagan, M. D.; and Rafael E. Molina, M. D., Hoffman Urological Clinic, 800 First Huntington National Bank Building, Huntington, West Virginia.**

Discussion

A variety of non-malignant lesions can affect the urinary tract. The bladder is easily accessible for inspection through a cystoscope to diagnose an entity. The lesions in the ureter, the renal pelvis and calyces are hard to visualize. Most of these lesions appear as negative shadows on an intravenous pyelogram. An awareness of the different pathological lesions and the differentiating features is essential in making a preoperative diagnosis.

The following classification is presented:

Primary:

(1.) Benign Tumors
- a. Mesenchymal—Fibroma
  —Leiomyoma
- b. Epithelial—Papilloma
- c. Fibroepithelial
- d. Hemangioma
- e. Xanthomatous polyp[1]
- f. Neurofibroma[2]

(2.) Non-opaque Calculi
- a. Uric Acid
- b. Cystine
- c. Matrix
- d. Xanthine

(3.) Vascular
- a. Arterial Compression
- b. Arteriovenous Malformation
- c. Hemangioma
- d. Renal Pelvic Varices
- e. Aneurysm[3]

(4.) Inflammatory
- a. Tuberculosis
- b. Papillary Necrosis
- c. Fungus Ball[4]
- d. Pyelitis Cystica
- e. Ureteritis Cystica
- f. Helminths

(5.) Congenital
- a. Fetal Lobulation [5]
- b. Aberrant Papilla

Figure 1. Intravenous pyelogram showing a rounded filling defect in the right renal pelvis.

Secondary:

Blood clots due to:

a. Tumors
b. Infections
c. Sickle Cell Disease
d. Renal Pelvic Varices
e. Hemangioma
f. Bleeding Disorders
g. Anticoagulants[6]
h. Trauma

Miscellaneous:

Air Bubbles

a. Iatrogenic (instrumental)
b. Gas-Forming Infections
c. Fistulae
d. Reflux from Urinary Conduit

Differential diagnosis of these lesions is dependent upon a complete history and a thorough physical examination, aided by several investigative procedures, of the patient. Hematological and chemical profile along with routine urinalysis, culture and cytological examination will give clues to most of the common lesions. High-dose drip urograms with tomography and fluoroscopy can help delineate lesions.

Case One

An eleven-year-old girl was admitted to a local hospital for evaluation of vague abdominal and

Figure 2. Fluoroscopic spot pictures revealing the filling defect to be persistent.

Figure 3. Inrtavenous pyelogram showing a long non-obstructing filling defect in the middle of the left ureter.

Figure 4. Retrograde ureteropyelogram on the left side has pushed the filling defect close to the renal pelvis and there are three air bubbles seen in the mid-portion of the ureter. Right kidney shows residual contrast from an intravenous urogram performed prior to cystoscopy and retrograde studies.

Figure 5. At exploration a large polyp on a long stalk was found.

back pain. All the studies were within normal limits. A routine urogram revealed a filling defect in the right renal pelvis (Figure 1). This defect persisted even on tomography and fluoroscopy (Figure 2). The right kidney of this patient was explored and a thorough search revealed only a fetal lobulation that was pressing on the middle of the pelvis from behind to give a negative shadow appearance.

Retrograde ureterogram is of immense value in discovering lesions of the ureter, especially if the lesion is benign with a long stalk.

Case Two

A thirty-five-year-old white male was admitted to a local hospital with a typical history of right ureteral colic. Urinalysis revealed microscopic hematuria. Intravenous urogram showed a very small right lower ureteral calculus which the patient subsequently passed. An incidental finding was a long filling defect in the left mid-ureter (Figure 3). Retrograde ureterogram revealed it to be a polyp on a long stalk (Figure 4). In this

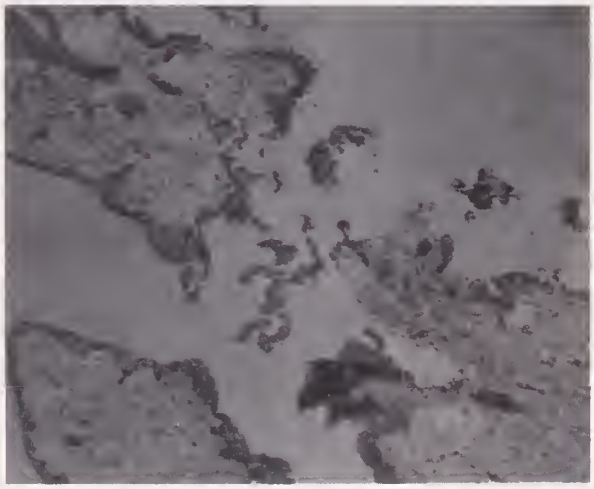


Figure 6. Microscopic section (high power, H&E stain) showing a fibrocollagenous stroma covered by transitional epithelium.

Figure 7. Intravenous pyelogram revealing nephrogram on the right side and non-visualization of the collecting structure.

Figure 9. Midstream renal arteriogram showing two renal arteries on the right side, superior and inferior.

Figure 8. Retrograde ureteropyelogram exhibiting filling defects in the right renal pelvis and hydrocalyces.

case a preoperative diagnosis of benign ureteral polyp was made. On exploration, a fibro-epithelial tumor was excised (Figures 5 and 6), and the patient's urinary tract was salvaged. Smooth migratory filling defects are most likely to be non-opaque calculi. Retrograde brush biopsy[7] and, recently, ureteroscopy[8] have also been used for diagnosis.

Renal angiography is essential to delineate the vascular lesions.

Figure 10. Selective renal arteriogram illustrating that the superior artery supplies the lateral half of the kidney and has a congenital arteriovenous malformation. The contrast material in the inferior venacava can be seen.

A thirty-one-year-old white female was admitted to a local hospital with a history of gross hematuria and dull right flank pain. Intravenous pyelogram showed non-visualization of the right kidney (Figure 7). On cystoscopy the blood was effluxing from the right ureteral orifice. Retrograde ureteropyelogram revealed multiple filling defects in the renal pelvis due to blood clots (Figure 8). Renal arteriogram was performed which showed two arteries supplying the medial and lateral halves of the kidney and a

Figure 11. Selective renal arteriogram showing the inferior artery supplying the medial half of the kidney.

Figure 13. Left retrograde ureteropyelogram confirming the filling defect in the upper ureter and the resultant hydronephrosis.

Figure 12. Intravenous pyelogram revealing a normal right kidney and a hydronephrotic left kidney with a filling defect just below the renal pelvis.

Figure 14. Postoperative intravenous pyelogram revealing almost complete resolution of the hydronephrosis and normal uretero-pelvic junction.

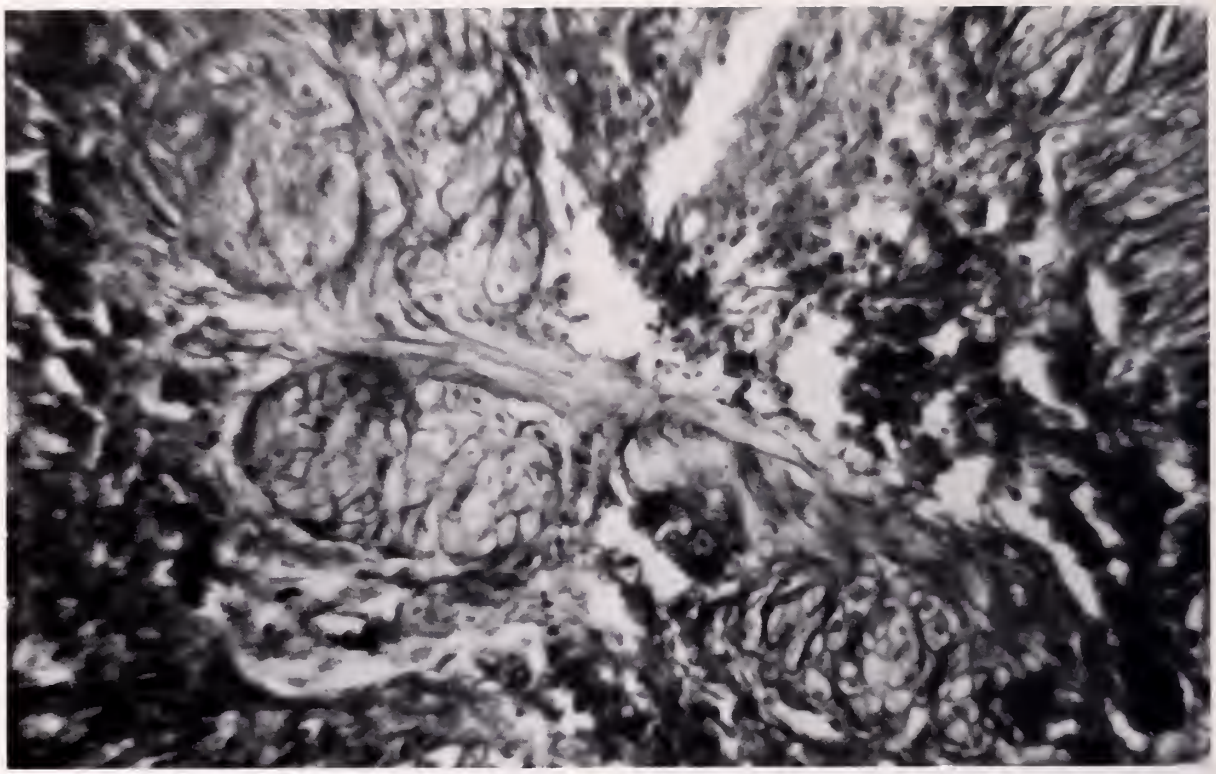


Figure 15. Microscopic section (high power-trichrom stain) diplaying the nerve bundles and fibrocollagenous tissue. Neurofibroma.

congenital arteriovenous fistula in association with the superior artery serving the lateral half (Figures 9, 10, 11). The patient continued to bleed, necessitating exploration of the kidney. The distribution of the blood supply was such that a nephrectomy had to be performed.

Finally, exploration in some instances may be necessary as in the following case.

Case Four

A fourteen-year-old white female was admitted to a local hospital with left-sided abdominal pain and nausea. At the age of three, this child was examined and treated for urinary tract infections and was found to have normal upper urinary tracts. An intravenous pyelogram during this admission showed a filling defect in the left upper ureter with hydronephrosis (Figure 12). Retrograde pyelogram confirmed the persistent defect (Figure 13). At exploration, a firm mass encircling the upper ureter was discovered. The renal pelvis and lower ureter were free. When the mass was excised, the frozen seection was reported as benign. An end-to-end ureteropyelostomy was performed and the patient's kidney saved (Figure 15).

References

1. Elson, E. C., and McLaughlin, A. P. III: Xanthomatous Polyp. Urology. 4:214-216, August, 1974.
2. Holloway, J. W.: Neurofibroma of Ureter. Personal Communications.
3. Malek, R. S.; Aguilo, J. J., and Hattery, R. R.: Radiolucent Filling Defects of the Renal Pelvis, Classification and Case Report of Unusual Cases. J. Urol. 114:508-513, October, 1975.
4. Turner, R. W.; Grigsby, T. H.; Enright, J. R.; Chance, H.; Frazier, T. C.; Womaeh, C. T., and Lang, E. K.: Anuria Secondary to Mechanical Obstruction Caused by a Candida Fungus Ball. J. Urol. 109:938-940, June, 1973.
5. Binder, R.; Korobkin, M.; Clark, R. E., and Palubinskas, A. J.: Aberrant Papillae and Other Filling Defects of the Renal Pelvis. Am. J. of Roentgenology, Radium Therapy and Nuclear Medicine. 114:746-752, April, 1972.
6. Rosen, M.: Acute Urinary Suppression Presumed Due to Bilateral Ureteric Obstruction by Blood Clots; An Unusual Feature of Anticoagulant Therapy. Medical J. of Australia. 1:660. March 25, 1972.
7. Gill, W. B.; Lu, C. T., and Thomasen, S.: Retrograde Brushing: A New Technique for Obtaining Histological and Cytological Material from Ureteral, Renal Pelvis and Renal Caliceal Lesions. J. Urol. 109:573, 1973.
8. Bush, I. M.: Ureteroscopy. Personal Communications.
9. DeKlatz, R. J., and Young, B. W.: Conservative Surgery in the Management of Benign Ureteral Polyps: A Case Report. British J. of Urol. 36:375-379, September, 1964.

Interpretation Of Non-Interpretive Psychiatric Intervention In The General Hospital Setting:

An Overview Of The Psychiatric Consultation

Greenbrier Almond, M. D.

Abstract

A PRIMARY care physician or a specialist consulting a psychiatrist can expect him to demonstrate certain skills:[9]

(1.) To assess the specific intentions of the referring physician, (2.) To conduct a comprehensive interview of the patient making an assessment based on information from the patient, the referring physician, other hospital personnel, the hospital chart, and the patient's family, (3.) To construct a formulation of the patient's problems with attention to the primary request, to specific circumstances, to the present and past significances of the illness and problems, and to personality influences, (4.) To define and implement appropriate interventions, addressing the problems that initiated the request for consultation, (5.) To undertake psychotherapeutic and psychopharmacologic treatment if referral is agreeable; and (6.) To communicate effectively with the referring physician both verbally and through concise, non-technically-worded notes.

Information developed in this paper shows that the psychiatrist does have a role on the medical and surgical team evaluating and treating the *whole person*. The psychiatrist possesses special skills as a biologist of human beings, broadly trained in the many perspectives of psychology, skillful in diagnosis and evaluation of best treatments, and trustworthy in the traditional sense of the physician.[5]

The Author

- **Greenbrier Almond, M. D., Second-Year Resident, Behavioral Medicine, Charleston Area Medical Center, Charleston, West Virginia.**

Consultation Liaison Psychiatry

The role of the psychiatrist as part of the medical or surgical team evaluating and treating the whole person requires exigent attention in this time of consumerism and defensive medical practicing. Current psychiatric and general medical literature define this dilemma by acknowledgement of the fundamental necessity to strengthen psychiatry's identity as a medical specialty.[3] A particularly apparent issue needing addressing involves the interface area—Consultation Liaison Psychiatry. The nuances of this frontier comprise the scope of this literature overview.

The title of this paper denotes the non-interpretive nature of psychiatric consultation which further connotes that timing of interpretation is highly important for productive therapeutic results. The title intimates that medicine practiced at its best remains an art. Yet another emphasis also appears. Currently much "magic" seems expected from the doctor. Too early prognosticating by the doctor as encouraged by the patient would seem to be a manipulation. The doctor must be cautious. He does not know the circumstances surrounding the patient-consumer's request for help; therefore, there is nothing wrong with a "wait-and-see" approach while appropriate therapeutic measures are being undertaken. To quote an axiom: "There are many ways to appear foolish but the most certain way is to predict the future."[8]

Certainly jokes can be very revealing. Freud theorized that humor signified one of our mature defenses. It is the freedom to give expression to one's feelings without blushing or squirming nor causing another to do so. With this in mind, an anecdote that should not evoke too much discomfort proposes well the theme of this paper. It goes like this: A sophomore medical student returning home to his physician-father responded to an inquiry about what his school was like. He replied that he had learned that a surgeon is someone who knows everything and does everything, an internist is someone who knows everything and does nothing, while a psychiatrist is someone who knows nothing and does nothing.

What does this "know nothing—do nothing" doctor offer in consultation? What is this unique entity termed the psychiatric consultation? When is it ordered? Who requests it? How is it carried out?

Definition

Defining the limits of the terms will be a helpful beginning. Circumstances vary but the consultation is rarely requested by the patient; in fact, it is often not directly for the patient's benefit. The patient may not have been informed

of the psychiatrist's visit and may not be able to participate when the psychiatrist arrives to see him. For example, he might be at the radiology department or might be exhausted from some lengthy procedure so that the interview must be postponed. The patient may have visitors who will have to be dismissed before the interview can begin. From the inception, the psychiatrist becomes a participating observer in a group that includes the patient, the referring doctor, the ward staff, the other patients, and the patient's family. Thus, the circumstances are complex in consultation and the reasons varied.[7]

Some of the more frequent reasons for psychiatric evaluation include the following:[7]

(1.) Organic brain syndromes
(2.) Postpartum and postoperative syndromes
(3.) Preoperative syndromes
(4.) Psychophysiological reactions
(5.) Intractable pain problems
(6.) Physical symptoms that are disproportionate to organic pathology
(7.) Depressive or anxiety reactions
(8.) Alcoholism or drug dependence
(9.) Concurrent functional psychoses
(10.) Conversion reactions
(11.) Non-cooperation with ward routine or medical procedures
(12.) Malingering in order to obtain hospital treatment

With the complications and scope of the consultation in mind, it is necessary to examine one appropriate definition of the psychiatric consultation: "A conference at which expert advice is sought and given or at which views are exchanged." Four sub-topics clarify this elemental definition:

(1.) A consultation is conceptually an educational experience for the primary care physician. As such it is one physician sharing with another his expertise on theory, diagnosis, and treatment.

(2.) A consultation basically involves a request for information or for an opinion. It involves asking for an opinion and receiving it.

(3.) A consultation may or may not be for the benefit of a specific patient, but it is always for the benefit of the doctor-consultor in his management of the patient.

(4.) The patient himself may or may not be seen or examined by the consultant but his informed consent is ethically advised even if only the study of records or verbal discussion ensues between consultant and consultor.[4]

Clinical judgment, doing what is prudent and reasonable, would seem to be the primary care physician's best guide.

The psychiatric consultation can be broken into four categories: (1) the hospital consultation, (2) the outpatient consultation, (3) the curbside consultation, and (4) the personal consultation.

Psychodynamics

Suppose that the indications as listed are present for a psychiatric consultation. The next crucial question is one of timing: when will the request be made? The psychodynamics of this question have been raised by many psychiatrists and the answers are illuminating if not incisive.

Of course, whenever a doctor needs an opinion or information, or whenever a patient requests a consultation, a meeting should ensue. Of greater interest, from the psychiatric vantage, is the timing of the consultation which provides clues concerning the motivation and the expectations of the referring physician. One type is the quick-note-on-the-chart-prior-to-discharge example. Here the inference may be that the consultor does not plan to make any serious use of the recommendations. Of course, the most prominent reason for getting the consult toward the end of the diagnostic period in the hospital would be to clarify the various components of aggravation or causation in the patient's problems. In any event, if the patient decides to give up his self-defeating life style in favor of a more productive behavioral pattern, he can now readily have follow-up as an outpatient with the psychiatrist. Another type is the early consultation of the psychiatrist soon after hospital admission. Perhaps the consultor in this situation is requesting a team effort on some psychophysiological disorder that has both organic changes and psychiatric perpetuation.

In either situation, the psychiatrist would seem helpful in identifying and strengthening four vital capacities of the physically ill and emotionally distraught whole person:

(1.) The capacity for the expression of needs, appetites, and drives.

(2.) The capacity to employ effectively the mechanisms for goal achievement (learning, memory, perception, etc.).

(3.) The capacity to maintain appropriate thresholds and tolerances for frustration and anxiety and to recover rapidly from their effects.

(4.) The capacity to maintain effective and well-modulated defense reactions.[2]

A third area of psychodynamics to consider is what happens among the staff providing good care for a patient when a psychiatric consultation

is proposed. Some will feel it to be a dangerous undertaking or, at best, useless. The motivations of those against consultation must be understood, since on occasion, the staff members who are opposed to psychiatric consultation may be most allied with the patient. For example, the alcoholic gets an immediate consult while the grandmotherly, sweet lady who might be depressed does not get one.[7]

Psychotherapeutics

The next area to call to question is how a psychiatric consultation is carried out. Thinking of this in six phases can help conceptualize what happens to the patient who is identified as having an emotional disturbance.[6] The suspicions are voiced during rounds that the patient has some "strangeness" about him and the psychiatric consultant has been notified. The first phase, then, is the patient's awareness of *being different.* In psychiatry, empathy (the ability to put oneself in another person's place, get into his frame of reference, and understand his feelings and behavior objectively) is one of the major qualities in a successful psychiatrist. A parallel between the patient's feeling that he is "losing his mind" and the psychiatric resident's feeling as he contemplates entering psychiatry can be drawn. His peers in medical school abjure his professional choice as "queer" or "peculiar." Phase one then is easy for a psychiatrist to identify.

Phase two can be termed *being discredited.* The patient's symptoms are implicitly or at times explicitly stated as being "all in his head." The parallel feeling with which the psychiatric consultant empathizes goes back to his own experience in training when his medical competence was questioned. Or the consultant may simply recall the poignant argument currently voiced as to whether or not a psychiatrist is a "real doc."

Phase three presents as *confusion.* For the patient, this confusion has occurred as a net effect of having his "sick role" questioned. A psychiatrist can also identify with this as he has the net effect of occupying a limbo area of medicine. His proper role continues to vacillate according to whose article one ascribes to in the medical journals.

All this leads to phase four: *exhaustion.* The patient has had numerous tests, been to multiple doctors "shopping" for a diagnosis, and now is quite spent literally and figuratively as his money is gone and his energy sapped. Psychiatric residents reach that end point too as they go through the rigors of training searching for a personal identity and an individual style. Finally, after much self-scrutiny and personal expose they introspect in an exhausted fashion: "I must be crazy to be in psychiatry; why didn't I go into radiology, internal medicine, or even surgery?"

The fifth phase marks the turning point: *renewal.* For a parallel in the psychiatrist this means having done his "homework" in understanding his own feelings. He has accepted the need to be openly receptive regarding alternatives to the strict medical model. In his training he has become comfortable using his own personality. As a consultant he proposes an open-ended, welcome, alternative to the bewildered, exhausted patient who has come up against the frustrations of fitting himself into a conventional disease model. The psychiatrist brings hope. He offers supportive understanding, listening to the maze of trials to which the patient has been subjected. The consult could end with a formulation of the patient's problems. Hopefully, if the situation warrants further work a contract for treatment can be arranged. If help proffered proves acceptable the psychiatrist then focuses on the relationship developing and offers the patient a unique opportunity. This new beginning is not couched in terms of getting better from an illness but rather expressed as a learning experience with personal feelings as the subject matter. Stress is placed on current interpersonal relating. This allows the patient to understand his feelings as they are happening. Together in a therapeutic alliance the doctor and patient learn about the psychological aspects of stress, coping, and adapting. The "here and now" setting may be a dying process, a bereavement, a transition state, or a life crisis.

The sixth and final phase consists of *affirmation.* This is where the psychiatrist, now therapist, parts company with the patient. The affirmation accents an internalizing of insight gained. If the work done in the doctor-patient relationship has been along traditional lines then one or more of the 12 ego functions have been strengthened or improved.[1] These ego functions encompass:

(1.) Reality testing
(2.) Judgment
(3.) Sense of reality
(4.) Control of drives
(5.) Thought processes
(6.) Defenses
(7.) Regression
(8.) Autonomous functioning
(9.) Stimulus barrier
(10.) Integration
(11.) Mastery
(12.) Object relations

References

1. Bellak, L.: The Role of Psychoanalysis in Contemporary Psychiatry. Am. J. of Psychiatry. 24:470-476, 1970.
2. Chapman, L. F., and Wolff, H. G.: Disease of the Neupallium and Impairment of the Highest Integrative Functions. Medical Clinics of North America. 677-689, 1958.
3. Greenblatt, Milton: Psychiatry: The Battered Child of Medicine. The New England J. of Medicine. 292, No. 5, 246-250, Jan. 30, 1975.
4. Hodge, James R.: Using the Psychiatrist More Effectively. Practical Psychiatry for the Primary Physician. Nelson Hall, Inc., 1975.
5. Holland, B. C., and Stoller, R. J. in: Usdin, G. (ed): Psychiatry: Education and Image. New York, Brunner/Mazel, 1973, p. 30.
6. Light, Donald, Jr.: Psychiatry Residents Follow Six Phased "Moral Career." Hospital Tribune. December, 1975.
7. Mackinnon, Roger A., and Michels, Robert: The Ward Consultation. The Psychiatric Interview in Clinical Practice. Saunders, Inc., 1971, p. 374.
8. Snyder, Russell D.: Doctor as Prognosticator. The New England J. of Medicine. Vol. 294, No. 5, p. 281, Jan. 29, 1976.
9. Yager, Joel, and Pasnau, Robert O.: The Educational Objectives of a Psychiatric Residency Program. Am. J. of Psychiatry. Vol. 133, No. 2, February, 1976.

Manuscript Information

Manuscripts to be presented for publication in *The West Virginia Medical Journal* should be typewritten, triple-spaced, on one side only of firm (no onion skin or flimsy), standard letter sized (8 1/2 by 11 in.) white paper. Wide margins (at least 1 1/4 in. on left) should be left free of typing. On the first or title page should be shown the title of the article, the name (or names) of the author, and his degrees. Pages should be numbered consecutively, the page number being shown in the right upper corner along with the surname of the author.

A short abstract summarizing the manuscript should be included. This should be typed in double space on a separate page.

Authors are requested to submit a carbon copy with the original.

Illustrations should be numbered and their approximate locations shown in the text. Each should be identified by placing on its back the author's name, its number and an indication of its "top." Drawings and charts intended for reproduction should be done in black (India) ink on pure white. Photographs should be on glossy paper and minimum of about 5 by 7 in. in size. A legend should be provided for each illustration and, preferably, attached to it.

All scientific material appearing in *The Journal* is reviewed by the Editorial Board. Manuscripts should be mailed to The Editor, West Virginia Medical Journal, Box 1031, Charleston, W. Va. 25324.

Medical Grand Rounds

From the West Virginia University Medical Center

Edited By

Raymond B. Weiss, M. D.

Associate Professor of Medicine

Carcinoid Tumors And Carcinoid Syndrome

Discussants: Carl E. Heltne, M. D.; Raymond B. Weiss, M. D.; And Shawn A. Chillag, M. D.

Carl E. Heltne, M. D., Medical Resident.

Case History

A 55-year-old woman was admitted for the third time to the West Virginia University Medical Center with a known diagnosis of malignant carcinoid syndrome. She complained of severe right upper quadrant abdominal pain and vomiting. These symptoms began approximately six weeks prior to admission and had become progressively severe.

She was initially seen here in 1966 for excision of a lipoma. At that time incidental complaints of occasional palpitations and postprandial cutaneous flushing were noted, but were not further evaluated. In 1972 the patient was readmitted for evaluation of mid-epigastric discomfort. generalized cutaneous flushing, and vomiting. These symptoms occurred approximately 10 minutes after meals. Pertinent tests at that time revealed an elevated urinary 5-HIAA level of 147 mg/24 hrs. (normal 1-7 mg/24 hours), a mass in the wall of the terminal ileum demonstrated by selective arteriography, and a positive liver scan with multiple filling defects. Based on these findings and the classical history, a diagnosis was made of a malignant ileal carcinoid tumor producing the carcinoid syndrome.

From the time of diagnosis until just recently the patient's course has been relatively indolent. Her symptoms have been controlled with chlorpromazine (Thorazine), cyproheptadine (Periactin) and alpha-methyldopa (Aldomet).

On physical examination during this most recent admission the following were noted: a grade III/IV holosystolic murmur along the left sternal border which increased in intensity with inspiration, hepatosplenomegaly, and right upper abdominal quadrant tenderness. Cutaneous flushing and tachycardia were provoked by palpation of the liver.

Laboratory data was as follows: hemoglobin 10.0 gm/dl; total protein 5.2 gm/dl; albumin 2.3 gm/dl; alkaline phosphatase 181 mu/ml; and LDH 383 mu/ml. A minimal right pleural effusion was seen on chest x-ray. and a liver scan showed increased filling defects since 1972.

The impression on this admission was progression of liver metastases and carcinoid cardiac involvement manifested as mild heart failure and tricuspid valve incompetence.

The patient was treated symptomatically and the abdominal pain lessened. She was discharged on Thorazine, and plans were made to begin chemotherapy in the near future. Since discharge the patient's cardiac status has deteriorated in spite of treatment with digoxin, furosemide (Lasix), and salt restriction.

Discussion

The carcinoid syndrome is a somewhat rare disorder that was first described by Biörck in 1952.[1] The syndrome may be defined as a constellation of symptoms and signs that include an intermittent violaceous flush, watery diarrhea, abdominal distention. and right-sided heart failure. Carcinoid tumors account for approximately 0.05 per cent of all tumors and constitute the majority of small bowel neoplastic lesions. In addition. approximately four per cent of all lung neoplasms are carcinoids.[3] Carcinoid tumors arise from the enterochromaffin cell which is present in the embryonic foregut, midgut, and hindgut. This distribution explains the diverse sites of origin of these tumors which include the

bronchus, biliary tract, pancreas, stomach, small intestine, Meckel's diverticulum, appendix, rectum and ovary. The enterochromaffin cell belongs to the APUD cell line which shares features of amine content, precursor uptake and decarboxylation. Thus, the carcinoid syndrome may occur from carcinoid tumors or as a paraneoplastic syndrome from such noncarcinoid neoplasms as small-cell carcinoma of the lung, ovarian tumors, cerebellar hemangioblastomas, and pheochromocytomas. They may also be associated with Type I pluriglandular adenomatosis (parathyroid adenomas, pancreatic nonbeta islet cell tumors and pituitary adenomas).[3,4]

Grossly, carcinoid tumors appear as small, round, plaque-like, submucosal elevations with an intact overlying mucosa. At the light microscopic level the lesion is composed of small nests, strands, or large masses of regular, polygonal cells with the individual cells having a striking monotonous resemblance to each other.[4]

Histochemically, they vary according to their embryonic origin. Those which arise from the foregut are argyrophilic in contrast to those which arise from the midgut which are argentaffin in nature. The carcinoid tumors of the hindgut tend to be negative for both argentaffin and argyrophilic reactions. These histochemical variations have clinical significance; those with argyrophilic reactions produce, when metastatic, the classic carcinoid syndrome; those with neither reaction rarely produce any manifestation of the carcinoid syndrome.[4]

Carcinoid tumors also are different from typical neoplastic lesions in that a diagnosis of neoplasia is based solely upon invasion or metastasis because of their inherent lack of anaplasia or abnormal mitotic figures.[3] At the electron microscopic level there are two organelles of importance, namely, the enterochromaffin granule and the lysosome.[5] The enterochromaffin granules are the site of biosynthesis, storage, and release of serotonin. The lysosome contains hydrolases and most importantly proteinases such as kallikrein. These two substances, serotonin and kallikrein, are considered to be the biochemical mediators responsible for the various expressions of the carcinoid syndrome.

Serotonin is synthesized by the hydroxylation of tryptophan to 5-hydroxytrytophan and subsequent decarboxylation to 5-hydroxytryptamine (serotonin). Catabolism occurs via monoamine oxidase deamination to form 5-hydroxyindoleacetaldehyde which is oxidized by aldehyde dehydrogenase to form 5-hydroxyindoleacetic acid (5-HIAA). This compound is then excreted in the urine. Of course, 5-HIAA, when present, provides a laboratory test diagnostic of the presence of carcinoid tumor, or rarely, other serotonin-secreting tumors.

Kallikrein is released from the carcinoid tumors and catalyzes the conversion of kininogen to lysyl-bradykinin. This undergoes cleavage by an aminopeptidase to form bradykinin which is a vasodilator and is purported to be a mediator of the cutaneous flush. Bradykinin is subsequently catabolized to inactive peptides and amino acids.

Carcinoid Syndrome

The classical carcinoid syndrome results when the primary tumor is derived from the argentaffin cells of the midgut, most frequently of the terminal ileum as occurred in our patient. Appendiceal carcinoid tumors rarely, if ever, metastasize, but ileal carcinoids metastasize to the mesenteric lymph nodes and then initially to the right lobe of the liver. The carcinoid syndrome with a primary ileal lesion does not occur until liver metastases have appeared and the biochemical substances can bypass the portal circulation and the hepatic degradation process.

The clinical features can be divided into cutaneous, gastrointestinal, and cardiovascular. The cutaneous manifestations include recurrent episodes of flushing, fixed telangiectatic changes and a pellagra-like dermatitis. The dramatic vasomotor phenomenon resulting in the flush is the hallmark of carcinoid syndrome. The flush predominantly occurs over the upper trunk, neck and face. This event may be precipitated by eating, exertion, ethanol, emotional stimuli, straining at stool, or by compression of a large liver mass. The attacks may be associated with hypotension, tachycardia, bronchoconstriction, tachypnea, and occasionally diarrhea. The precise mechanism for this process is ill-defined, but these signs have been reproduced by administration of bradykinin. The fixed telangiectatic changes seen are associated with an infiltration of mast cells and are present primarily over the cheeks and bridge of the nose. The pellagra-like dermatitis of the extremities is manifested by pruritis and a peculiar orange blistering of the skin. The lesions about the neck are known as Casal's necklace. This appears to be a result of abnormal tryptophan metabolism.

The gastrointestinal manifestations of intermittent attacks of diarrhea, cramps and nonbloody mucoid stools are the most debilitating component of carcinoid syndrome. These symptoms appear to be mediated by serotonin.

Three other abdominal symptoms are noted in patients with carcinoid syndrome. The first is the acute abdominal crisis which consists of abdominal pain, fever, and leucocytosis. This is usually associated with necrosis of metastatic lesions of the liver and is difficult to distinguish from small bowel obstruction. However, the latter is very rare in patients with carcinoid tumors unless there has been previous surgery. A second problem is that of a deficiency syndrome which is the result of abnormal tryptophan metabolism. Normally in the metabolism of tryptophan, approximately 98 per cent is converted to niacin and proteins. In the carcinoid syndrome, however, only 40 per cent proceeds down this pathway. This results in hypoproteinemia and pellagra which is manifested by dementia, dermatitis, and diarrhea. The third abdominal problem is that of hepatic insufficiency. This is an end-stage result of metastatic carcinoid and results in hypoalbuminemia, hyperbilirubinemia, bleeding, and hepatic coma.

The most striking cardiovascular manifestation are lesions consisting of endocardial fibrotic plaques involving the pulmonary and tricuspid valves, right atrium and ventricle, and the cardiac veins. The most common hemodynamic manifestation is that of pulmonic stenosis accompanied by tricuspid incompetence. The location of these lesions suggest that a circulating hormonal substance is the mediator of the fibrosis. This seems to occur when there is an excess of serotonin in a tryptophan-deficient state. It is of interest to note that involvement of the aortic and mitral valves occurs when there is an atrial septal defect with right-to-left shunting or when a bronchial carcinoid tumor is present with direct venous drainage to the left side of the heart.[6] Heart failure as manifested in the case reported is a common cause of death in these patients. The overall course in classical carcinoid syndrome is one of indolent tumor growth with some patients surviving 10 to 15 years.

Variants of Carcinoid Syndrome

There are two variants of the classic carcinoid syndrome. They occur in the gastric and bronchial carcinoid tumors. The gastric tumors are associated with a severe bright-red flush present over the upper torso. Cardiac abnormalities and metastatic lesions beyond the abdominal cavity are rare. Histochemically the enterochromaffin cells are argyrophilic and often lack the decarboxylase enzyme. Therefore 5-hydroxytryptophan and 5-hydroxytryptamine are elevated. In addition these lesions are often rich in histamine which may explain the high frequency of peptic ulceration and bleeding that occurs.[4] Alpha-methyldopa may be helpful in the treatment of this variation. These tumors can also have an indolent course.[7]

The flush in the patients with bronchial carcinoid is prolonged and severe, but responds dramatically to steroids. This syndrome is associated with left-sided heart failure and pulmonary edema. Metastatic lesions are often widespread and associated with osteoblastic bone lesions. There are usually large amounts of 5-hydroxytryptamine as well as 5-HIAA present in the urine. Also there is a high incidence of other endocrine disorders such as Cushing's syndrome.[8] The prognosis is relatively poor with survival reported from two to seven years.[4]

The diagnosis of carcinoid syndrome is largely made on the basis of a good history and physical examination including a pelvic exam for ovarian lesions. X-ray examinations may be helpful in detecting bronchial carcinoids, peptic ulceration and primary gastric carcinoid tumors. Endoscopic examination is needed, however, to assure the proper diagnosis. The laboratory diagnosis is based upon a urinary 5-hydroxyindole acetic acid level greater than 25 mg/day. Urine assay for 5-hydroxytryptophan, 5-hydroxytryptamine and histamine are helpful when dealing with the variant syndromes.[2]

Two provocative testing methods are available. The epinephrine provocative test produces the clinical spectrum in patients with malignant carcinoid syndrome; however, reports of severe vascular collapse and paradoxical hypertension occurring with this test would suggest that this method be avoided.[2] A second test is one where calcium gluconate is injected and this appears to precipitate symptoms in patients with the malignant carcinoid syndrome.[9]

The case presented is illustrative of the classic course of malignant carcinoid tumor and syndrome with the primary being present in the ileum, metastatic disease in the liver, cutaneous flushing, and right-sided cardiac involvement. Her disease has been indolent, yet slowly progressive, over the past 10 years and up until her recent hospitalization, she obtained relief with only symptomatic therapy.

Raymond B. Weiss, M. D., Medical Oncologist.

Doctor Heltne has described many of the interesting clinical features of carcinoid tumors. I would like to next turn to the treatment of these tumors.

In the process of discussing treatment we will be talking about a drug with which many are probably unfamiliar, namely streptozotocin. I

will review some aspects of this drug, and Doctor Chillag will review treatment of the syndrome and the malignancy.

Streptozotocin is a naturally-occurring nitrosourea antibiotic which was isolated from a broth culture of *Streptomyces acromogenes* in 1960. Subsequently the chemical structure was elucidated, and the drug synthesized. It was submitted to the animal tumor drug-screening program funded by the National Cancer Institute and found to be active in L_{1210} mouse leukemia, a malignancy akin to human acute lymphatic leukemia against which potential anti-tumor agents are tested. Streptozotocin caused a 40 per cent increase in survival compared to controls and was active at a variety of dose schedules.[10]

During toxicity evaluation in laboratory animals it was found to be diabetogenic in dogs, monkeys, and rats, but not in rabbits or guinea pigs except at very high doses. This was a property of great clinical interest. Another interesting property was the lack of marrow suppression, an all-too-common toxic effect of antineoplastic drugs.

The mechanism of action is unknown, but its primary effect is to inhibit DNA synthesis. It is directly toxic to islet beta cells and interferes with glucose enzyme action so that the end result is excess gluconeogenesis.[10]

With the activity of this drug in L_{1210} mouse leukemia and the diabetogenic effect, it was realized that streptozotocin might have use in the treatment of human islet cell malignancies. In 1968 it was first used in a patient with islet cell carcinoma and, not only did it effectively control hypoglycemic symptoms, but it caused measurable tumor reduction. Later, in a series of 52 patients with islet cell tumors treated with streptozotocin, it was reported[11] that 65 per cent of the patients had biochemical improvements in their disease and 50 per cent had measurable tumor reduction. A significant increase in one-year survival and a doubling of median survival was demonstrated for responders compared to non-responders.

It has also been found effective against other metabolically-active GI tumors such as carcinoid tumors and Zollinger-Ellison syndrome-producing islet tumors. In addition, it has activity in lymphomas, gastrointestinal adenocarcinomas and Hodgkin's disease, particularly the latter. Streptozotocin is still classed as an investigational drug, but many medical centers are using it in experimental protocols for the above malignancies, including West Virginia University.

Shawn A. Chillag, M. D., Resident in Medicine.

Treatment

The symptomatology, location, histology and potential for spread are determinants of therapy in carcinoid tumors. Doctor Heltne has discussed some of these considerations. Most carcinoid tumors are present within two feet of the ileocecal valve where the concentration of argentaffin cells is the greatest. Appendiceal location accounts for 40 per cent of carcinoids, and rectal locations for 15 per cent, but neither of these ordinarily produces the carcinoid syndrome.

Survival in carcinoid tumors, with and without carcinoid syndrome, is certainly better than that of other gastrointestinal tumors, but these tumors still warrant aggressive treatment initially and for palliation. Carcinoid in the appendix is regularly surgically curable, whereas the rectal carcinoid is frequently incurable and 28 per cent are metastatic at the time of diagnosis.[12] Five-year survival in ileocecal carcinoid is 83 per cent for a single tumor and 21 per cent if liver metastases are evident.

Unfortunately, ileocecal carcinoid is usually clinically silent until liver metastases become obvious. Ovarian and lung carcinoid need not metastasize to produce symptoms. The probable explanation is that the venous drainage of the ovaries and lungs is systemic, thus bypassing the liver where excessive serotonin secretion would otherwise be metabolized by monoamine oxidase.[13]

Surgery

As in pheochromocytoma, precise preoperative and intraoperative handling of cases of carcinoid syndrome is paramount for successful surgery. Anti-serotonin and anti-bradykinin agents should be used in preparing the patient for surgery and during surgery.[14] Restriction of high-tryptophan foods such as bananas, tomatoes, avocadoes, red plums, walnuts and eggplant is necessary. Morphine and curare should be avoided. Some authors have advocated regional anesthesia, but Déry, who has done extensive work in this field, uses general anesthesia.[5] Corticosteroids should be used to prevent bronchospasm. Extensive handling of the tumor during resection may precipitate problems. Symptomatic improvement can be directly related to a reduction of measurable tumor and to lowering of secretory products as measured by 5-HIAA.

Palliative resection usually involves hepatic metastases. Enucleation of single or multiple masses may be accomplished. Up to 1800 grams of tissue have been removed.[15] A prior surgical resection does not preclude another; however, there is an increased incidence of adhesions in

these patients. In carcinoid valvular heart disease the valve lesion may progress despite a surgical or chemical cure. Surgery is a useful adjunct in ameliorating the symptoms of carcinoid syndrome.

Radiation therapy has been less effective as carcinoid tumors are generally radio-resistant. In other tumors radiation is a major modality in managing brain and bone metastases. Fortunately in this radio-resistant tumor, metastases to brain and bone are very rare.[12]

Antihormonal Therapy

Pharmacologic management has been the mainstay of symptomatic treatment. Dietary restriction of tryptophan has little place in long-term management. Serotonin antagonists are the most commonly used agents. Methysergide (Sansert), a 5-hydroxytryptophan antagonist, is the most effective of these compounds in a dose of 8-32 mg daily.[13] Its effect may be enhanced by noting a pattern for the symptoms and medicating accordingly. Methysergide is structurally similar to 5-HT and can produce heart disease similar to the carcinoid syndrome as well as retroperitoneal fibrosis. Periactin is a benign drug that antagonizes the peripheral effects of serotonin. The flushing of carcinoid is generally felt to be secondary to the kallikrein produced. Phenothiazines and corticosteroids are the chief agents used to control flushing. Monoamine oxidase inhibitors (iproniazid) may worsen the symptoms by blocking serotonin degradation.

Opiates and diphenoxylate hydrochloride with atropine (Lomotil) can be useful in alleviating diarrhea. Malnourishment due to frequent gastrointestinal upset or malabsorption may be a problem, so vitamin supplements should be used. In some cases a high protein diet should be tried.[14]

Chemotherapy

Optimal chemotherapy of carcinoid tumors is not well defined. Unfortunately, the tumor response to drugs has not been overwhelming. As in the surgical management, pre-treatment is important. Exacerbations of symptoms may occur with chemotherapy, presumably related to release of serotonin agents from destroyed tumor cells. Many cytotoxic drugs have been tried. 5-fluorouracil is an active agent in gastrointestinal adenocarcinomas and also in GI carcinoid tumors. The dosage for carcinoid tumor is similar to that used for adenocarcinoma. 5-fluorouracil has been used intravenously, but larger doses may be given via hepatic artery catheterization. This route of administration in the treatment of primary hepatoma and solitary liver metastases is well recognized.[16,17]

Moertel has investigated streptozotocin in advanced gastrointestinal cancer with particularly good results in a small number of cases of carcinoid tumor.[18] Symptomatic improvement was present in three of four cases and objective improvement occurred in two.[18] Feldman has also used intravenous streptozotocin with striking objective tumor regression in two severely-ill patients.[19] Streptozotocin has been given in pancreatic cholera via the hepatic artery[20] and perhaps this could be used for carcinoid tumors also. Larger doses may thus be used with fewer side effects.[20,21]

In summary, carcinoid is a tumor that is slow-growing, is often unresectable at the time of surgery, is amenable to palliation, and is malignant in its clinical course more because of its secretory products than because of histology or position. Periactin, Sansert, and Thorazine are regularly used for controlling symptoms. Surgery has a very important place in palliation, mainly for hepatic metastases. The chemotherapy most widely used is 5-fluorouracil. Instillation through the hepatic artery to allow larger doses and obviate side effects should be strongly considered. Streptozotocin is assuming a larger place in treatment.[18,19,20,21] Perhaps it should be used in combination with 5-fluorouracil.

References

1. Biörck, G.; Axen, O., and Thorson, A.: Unusual Cyanosis in a Boy with Congenital Pulmonary Stenosis and Tricuspid Insufficiency: Fatal Outcome after Angiography. Am. Heart J. 44:143-148, 1952.
2. Ureleus, A. L.: Diagnosis and Treatment of Malignant Carcinoid Syndrome. JAMA. 229:1346-1348, 1974.
3. Williams, R. H.: Textbook of Endocrinology, 5th ed. Philadelphia, W. B. Saunders Company, p. 1084-1104, 1974.
4. Tilson, M. D.: Carcinoid Syndrome. Surg. Clin. N. Amer. 54:409-423, 1974.
5. Déry, R.: Theoretical and Clinical Consideration in Anesthesia for Secreting Carcinoid Tumors. Canad. Anaesth. Soc. 18:245-263, 1971.
6. Roberts, W. C., and Sjöerdsma, A.: The Cardiac Disease Associated with the Carcinoid Syndrome. Amer. J. Med. 36:5-34, 1964.
7. Editorial: Diagnosis of Malignant Carcinoid Syndrome: Brit. Med. J. 3:122-123, 1975.
8. Isawa, T.; Koichi, O.; Kiyoshi, K. *et al*: Cushing's Syndrome Caused by a Recurrent Malignant Bronchial Carcinoid. Amer. Rev. Resp. Dis. 108:1200-1204, 1973.
9. Kaplan, E. L.; Jaffe, B. M., and Peskin, G. W.: A New Provocative Test for the Diagnosis of Carcinoid Syndrome. Am. J. Surg. 123:173-178, 1972.
10. Handelsman, H.; Broder, L. E.; Slavik, M. *et al*: Streptozotocin (NSC 85998). Clinical brochure. National Cancer Institute, Bethesda, Maryland, 1974.
11. Broder, L. E., and Carter, S. K.: Pancreatic Islet Cell Carcinoma. Results of Therapy with Streptozotocin in 52 Patients. Ann. Intern. Med. 79:108-118, 1973.
12. Morgan, J.; Marks, C., and Hearn, D.: Carcinoid Tumors of the Gastrointestinal Tract. Ann. Surg. 180:720-727, 1973.

13. Schein, P.: Chemotherapeutic Management of the Hormone-Secreting Endocrine Malignancies. Cancer. 30:1616-1626, 1972.
14. Mengel, C.: Therapy of the Malignant Carcinoid Syndrome. Ann. Intern. Med. 62:587-602, 1965.
15. Stephen, J., and Grahame-Smith, D.: Treatment of the Carcinoid Syndrome by Local Removal of Hepatic Metastases. Proc. R. Soc. Med. 65:444-446, 1972.
16. Murray-Lyon, I.; Dawson, J., and Parsons, V.: Treatment of Secondary Hepatic Tumors by Ligation of Hepatic Artery and Infusion of Cytotoxic Drugs. Lancet. 2:172-175, 1970.
17. Editorial: Taking Stock of the Carcinoid Syndrome. Lancet. 1:711-712, 1973.
18. Moertel, C.; Reitemeier, R.; Schutt, A. *et al*: Phase II Study of Streptozotocin (NSC-85998) in the Treatment of Advanced Gastrointestinal Cancer. Cancer Chemother. Rep. 55:303-306, 1971.
19. Feldman, J.; Quickel, K.; Mareck, R. *et al*: Streptozotocin Treatment of Metastatic Carcinoid Tumors. South. Med. J. 65:1325-1327, 1972.
20. Editorial: Streptozotocin for Pancreatic Cholera. Lancet. 2:1327, 1973.
21. Kahn, C.; Levy, A., and Gardner, J.: Pancreatic Cholera: Beneficial Effects of Treatment with Streptozotocin. N. Engl. J. Med. 292:941-945, 1975.

Children of Men With History of Heart Attack Have Higher Cholesterol Levels

CHILDREN of men who have suffered a history of heart attack showed a significantly higher level of cholesterol than children of "normal" fathers, according to a report in a recent issue of *Pediatrics*, the monthly scientific journal of the American Academy of Pediatrics.

The study measured cholesterol levels in two groups of children. The first group was from families of men who had suffered myocardial infarction before age 50. The second group included children of fathers similar to the heart attack victims but with no history of heart trouble themselves. A total of 176 children was tested in the study.

The tests showed that children of men with heart trouble had significantly higher cholesterol levels than those children of "normal" fathers. The elevated cholesterol levels were consistent in all age groups through 21 years old, and were not significantly different between boys and girls.

An interesting sidelight to the study: the researchers found that "cholesterol levels among children of both affected and healthy men show a dip during adolescence. Cholesterol rises during early childhood, peaks at 10 to 12 years of age, falls to a new low at 14 to 16, and begins to rise subsequently."

A Continuing Medical Education Event!

The Tenth Mid-Winter Clinical Conference

Daniel Boone Hotel
Washington and Capitol Streets, Charleston, W. Va.

January 28-30

Such sponsors and participants as the West Virginia State Medical Association; American Diabetes Association, West Virginia Affiliate; American Heart Association, West Virginia Affiliate; West Virginia Lung Association and its Kanawha County Council; West Virginia Chapter, American Academy of Family Physicians; West Virginia University School of Medicine and its Alumni Association; West Virginia Chapter, American Society of Internal Medicine; West Virginia Medical Institute, Inc.; West Virginia Division, American Cancer Society; Kanawha Medical Society and its Woman's Auxiliary; Section on Orthopedic Surgery, West Virginia State Medical Association; and West Virginia Chapter, American Academy of Pediatrics.

Watch The Journal For Program Details

THE PROGRAM CO-CHAIRMEN again are Ralph H. Nestmann, M. D., and Joseph T. Skaggs, M. D., both of Charleston. Also on the Program Committee are William O. McMillan, Jr., M. D., of Charleston, and C. Carl Tully, M. D., of South Charleston.

THE REGISTRATION FEE of $20 for the entire conference, including the Saturday night dinner, will be charged all registrants except nurses, medical students, interns and residents. Dinner tickets for the latter participants, spouses and other guests will be available at the registration desk. Advance registration is requested, and please make checks payable to "WEST VIRGINIA STATE MEDICAL ASSOCIATION."

ACCREDITATION: Attendance will be acceptable for Category 1 credit toward the Physician's Recognition Award of the American Medical Association; and the program also is expected to carry prescribed credit by the American Academy of Family Physicians.

OVERNIGHT ACCOMMODATIONS: Physicians should communicate directly with the reservation manager of the hotel or motor inn of their choice, with the conference headquarters hotel setting aside rooms for registrants.

FOR ADVANCE REGISTRATION, please complete the form below and mail to: WEST VIRGINIA STATE MEDICAL ASSOCIATION, P. O. BOX 1031, CHARLESTON, W. VA. 25324.

- -

Please register me for the Tenth Mid-Winter Clinical Conference in Charleston, W. Va., January 28-30, 1977. My $20 registration fee is (is not) enclosed.

I will attend sessions at 2 P. M. Friday, January 28 ..... 8 P. M. Friday .....

9:30 A. M. Saturday, January 29 ..... 2 P. M. Saturday ..... Saturday Dinner .....

9:30 A. M. Sunday, January 30 ..... All sessions ..... .

Name (please print) _____ *Specialty* _____

Address _____ *City* _____

A message from . . .

The President

'PARANOIA' HEALTHY FOR PHYSICIANS

DID you know that all physicians are paranoid? You might think about this for a bit, then see if you agree that it is true.

Early in our education, we well might get the feeling that certain teachers or professors are conspiring to prevent us from graduating, or to make grades necessary for admission to medical school. Perhaps this is a stratagem to make us study hard, and to "thwart the enemy."

Later, we can get an idea that the government, and the Internal Revenue Service, are "out to get us."

Actually, paranoia is a ten-dollar word for suspicion, and this can be a healthy condition for physicians.

My solution for all this is to study, fight, and pay all my taxes.

But most of all, to try harder to care for my patients.

John J. Mahood

JOHN J. MAHOOD, M. D., *President*

THE WEST VIRGINIA MEDICAL JOURNAL

Official Organ of the West Virginia State Medical Association

The Publication Committee is not responsible for the authenticity of opinion or statements made by authors or in communications submitted to this Journal for publication. The author or communicant shall be held entirely responsible.

Published monthly on the first day of the month, at Charleston by the West Virginia State Medical Association. Original articles are accepted on condition that they are contributed exclusively to the Journal. Advertising rates furnished on request.

Address all communications to Business Manager, West Virginia Medical Journal, Box 1031, Charleston, West Virginia 25324. Phone 346-0551.

EDITORIALS

HMOs AND RATIONING

One criticism of HMOs heard from subscribers to such plans is the impersonality of the care. Patients cannot even count on seeing the same doctor for two visits in a row.

It is argued, and perhaps even with some validity, that this has little to do with the quality of the care dispensed. This issue is arguable, at least, since—from the standpoint of outcome of care—much really depends on how the patient feels about what transpired during the process.

The important point is that patients feel that they have been put through a process resembling an assembly line and out they tumble at the end of the line neatly stapled and packaged ready for delivery home. The care has been depersonalized, and they feel dehumanized.

The doctors involved in this care are, without doubt, just as competent, have just as much training, as many credentials and come from backgrounds similar to any other doctor in any other type of practice. They have similar interests, hobbies and avocations, live in similar houses, attend the same churches and send their children to the same schools as any other doctor. And yet, somehow their relationship with patients is different.

Are doctors in traditional private practice simply craven? Their personal relationship with patients something assumed? Something phony? A put on? Probably not. At least, one would have to assume a remarkable degree of insensitivity or gullibility on the part of patients to attribute the difference to such a cause.

The basis of the difference must be integral to the HMO system. Something in the system must block the unfolding of a relationship which, in other circumstances, develops naturally.

One routinely added function of a doctor in an HMO is that of a rationer of care and benefits. In HMOs the cost of time spent with a patient, the cost of studies, drugs, procedures and devices are important factors in the evaluation of the patient and in therapeutic decisions regarding that patient. On one side of the scale are these costs and, on the other, the value of that patient. The doctor weighs that value somehow in accordance with his own value system.

It might be argued that doctors have always to some extent rationed care in order to avoid exceeding the resources or insurance coverage of a patient. This is certainly true but the critical difference here is that decisions have been made in keeping with the best interest of the patient rather than of a plan. In HMOs, solvency and fiscal integrity of the plan are of overriding importance in arriving at a plan of study and treatment for patients.

It is little wonder that, under the cold and icy glare of such evaluation, a personal relationship is stunted or perhaps never germinates. The care seems cold and impersonal because it must be cold and impersonal. Emotion, closeness, personal ties will tip the scales too heavily. They might bankrupt the system.

It appears that attempts will be made to create some system for rationing health care. Penalties attached to making doctors the rationers seem unreasonable. Efforts to force doctors into this role should be resisted.

Systems of peer review have been put into effect and have demonstrated that they are capable of controlling unnecessary medical care expenses without, in any way, sacrificing quality. They do this without placing barriers between doctor and patient which are thrust there through any mechanism of care with rationing as its basis.

STUDENTS ENROLLED IN WVU MEDICAL CENTER

In the October, 1971, issue of the *Journal* there appeared an editorial which gave the number of students enrolled at the West Virginia University Medical Center. The editorial emphasized that since the West Virginia State Medical Association played a very important part in making the Medical Center possible it was quite in order to keep the medical profession informed from time to time of the student enrollment. Since more than five years have elapsed since the last report was made, it was deemed timely to make a further report.

In the first semester of 1976 the enrollment in the Medical Center was as follows:

Medicine, 337; Pharmacy, 210; Dentistry, 242; Nursing, 200; Medical Technology, 59; Dental Hygiene, 99; Physical Therapy, 30; X-ray Technology, 20; and Graduate Students, 93—a total of 1,290. In 1970, Medicine was 285, the total 1,115.

This is a large body of students, and as mentioned in a previous editorial, the Medical Center has a larger enrollment than many small colleges in the United States.

It seems proper to write a word about graduate students. They are primarily enrolled in the basic science courses (anatomy, biochemistry, microbiology, pathology, pharmacology, and physiology and biophysics). A few of these work toward a master's degree, but the majority work toward a doctor of philosophy degree; as a rule three or four years are required to obtain the latter degree.

These graduate students are carefully chosen, and in most instances required to take courses in higher mathematics and often in advanced chemistry or physics. The fact that the Medical Center is a part of the University makes this possible. Upon graduation, a few enter the commercial field, but the majority become teachers, some of them in medical centers. It is important, therefore, that they be carefully chosen and well trained. During the last year or two of their graduate program they assist (in a minor capacity) teaching in the department in which they are taking their degree.

Another important educational function of the Medical Center, of course, is the training offered by the University Hospital. Presently there are 161 residents. The so-called internships are practically phased out. These residents may be regarded as postgraduate students and are in residence for three or even five years.

In sum, it may be seen that the Medical Center offers many educational experiences to a large number of students. The latter are fortunate that they can take their work in such a commodious building and in such pleasant surroundings. As pointed out in previous editorials, the citizens of West Virginia are to be highly commended for their foresight and generosity in having established such a splendid Medical Center.

PHYSICIAN CONCERNS GET REP. STAGGERS' ATTENTION

It's particularly heartening when an elected representative goes out of his way amid his overall burdens and responsibilities to show some clear personal interest and concern with respect to the medical community. Such consideration was demonstrated in recent weeks by veteran Representative Harley O. Staggers of West Virginia's Second District as a House-Senate Conference Committee wrestled with a complex health manpower measure.

There were a number of provisions in that legislation about which medicine was extremely sensitive. The West Virginia State Medical Association called Representative Staggers' attention to several of them. He responded in a fair and candid manner certainly consistent with his long years of service and his key role as Chairman of the House Committee on Interstate and Foreign Commerce which deals each year with hundreds of bills related to health.

Without doubt, his strong efforts contributed significantly to amendment or deletion of numerous undesirable provisions from the manpower legislation—including the proposed mandatory federal control of medical residencies.

Legislative proposals dealing with medical and health care in general—and in many instances touching directly the physician in his individual, day-by-day practice—have long ago reached major flood levels in both numbers and impact. Keeping close to developments on the Federal as well as State level has become a most difficult assignment.

Successful steps to curb Federal controls and other measures which hamstring the physician's capacity to give his patients proper care must, of course, originate in strenuous grass-roots efforts. But all such work can bear fruit only through open and honest communications with legislators, and their willingness to listen to, and weigh carefully, the points and questions raised by the people back home.

It's nice to have a friend like Representative Staggers when you need him.

Good news was laced with bad in the recent report made to Council and the Insurance Committee by Aetna Insurance Company. The good news is that the rates are going up just 5.4 per cent in 1977. The bad news is that this applies to just some of us. The rest, as a result of reclassification in risk category, will pay substantially higher premiums than in previous years. Without reclassification, we are told, the rate increase would be 10.4 per cent. This is just another way of saying that the total premium paid by doctors in this state will go up at least 10.4 per cent.

THE INSURANCE PACKAGE

There is some equity in this, of course, in that those doing riskier work will pay higher rates. No doubt some so affected will choose to stop doing certain procedures, such as deliveries and performing or assisting at surgery, in order to avoid reclassification. This is bad because it will diminish medical service to many patients or, at the very least, cause inconvenience to them by requiring them to seek certain types of care in places remote from where they are accustomed to going and from doctors they don't even know.

We wonder if inconvenience such as this will irritate patients and their families to the extent that they will be more likely to sue the doctor who eventually performs the service when results are, in the least, other than they expect. Perhaps. We next wonder whether this will then tend to create a brushfire effect wherein it will become easier and more popular for any patient to sue any doctor. This is a phenomenon seen in other states.

One other change announced by the insurance people should make doctors wary. In the new medical liability policies we will no longer have the option to approve or disapprove a decision to settle a claim against us. This option will now lie entirely with the insurance carrier. We are assured, but not in writing, that more decisions to settle claims will be presented to district review panels, made up of doctors, for their comments. It has been made perfectly clear, however, that the final decision will be in the hands of the carrier.

We understand that legal costs to defend a case in court start at about $20,000. Added to this is the risk of a large award if the defense is unsuccessful. If a claim can be settled for the relative pittance of a few thousand dollars, to stockholders, it would seem almost a dereliction of duty on the insurance company's part to fail to seize the opportunity to settle.

Unfortunately, this requires the defendant doctor to, in effect, plead guilty to a charge concerning which he might not feel guilty. Further, the settlement will obligate him to pay additional ratings and surcharges on subsequent liability policies in future years.

There might even be a constitutional question here. Since there is a virtual liability insurance monopoly, is the doctor being coerced into signing away his future rights to a trial by jury? We are taught by insurance companies that patients cannot sign away such rights via consent forms or even arrangements to arbitrate made in anticipation of surgery. Does not the same principle apply to doctors? Perhaps one doctor will choose to test this in court.

If it were merely a doctor's pride and vanity which forced an unnecessary and doomed-to-failure defense of a claim, few would object to stepping on that pride and vanity by opting for a forced settlement. Quite frankly, however, insurance companies have shown themselves much too likely to look at the short-term balance sheet and to avoid other matters of principle and equity for them to have a free hand in decisions to settle. There is little doubt that short-sightedness in this regard has encouraged and fostered the institution of countless frivolous suits by predatory attorneys and rapacious patients. Some part of the malpractice problem today is a direct result of short-sightedness.

Too many suits have been settled simply because it was cheaper to settle than to win in court. In an insurance carrier we must be assured we will continue to have something more than a transmittal agent for funds, collected as medical liability premiums, to be directed to applicants who express some yearning for them.

Perhaps we should say nothing and simply be thankful that we have an insurance carrier of some stature which is willing to sell us insurance. Indeed, we are thankful for that, but not to the extent we are willing to close our eyes to the hazards of worsening an already unholy mess.

We need ironclad assurance that the doctor's interest will be protected in any decision to settle a claim. In our efforts to manage immediate problems in the medical liability field we dare not overlook long-term sequellae of short-term solutions.

GENERAL NEWS

Sports Medicine Speakers Named For Clinical Conference

The speakers for the Symposium on Sports Medicine which will open the Tenth Mid-Winter Clinical Conference have been announced by the Program Committee.

The annual continuing medical education event, sponsored by the State Medical Association in con-

Herbert E. Warden, M. D.

Johnsey L. Leef, Jr., M. D.

junction with other medical groups and volunteer health agencies, will be held in Charleston next January 28-30 at the Daniel Boone Hotel.

Doctor Majestro To Preside

The opening sports medicine program (physicians' session) will begin at 2 P. M. on Friday, January 28. The sports medicine session for the public will be held that evening at 8 o'clock. Dr. Tony C. Majestro, Charleston orthopedic surgeon who has worked with the Program Committee on this segment of the conference, will preside at both sessions. Doctor Majestro also is a Clinical Assistant Professor, Orthopedic Surgery, at the Charleston Division, West Virginia University Medical Center.

The afternoon physicians' session will consist of a number of brief, 15-minute talks, beginning with introductory presentations and followed by discussions of specific sports injuries. Periods for questions from conference participants are scheduled.

The speakers and their topics during the introductory phase will be "The Physical Exam—Basis for Exclusion from Athletics"—Dr. Herbert E. Warden, Morgantown, Professor and Assistant Chairman of Surgery, WVU; "The Trainer's Role (Trainer-Teacher Concept at the High School Level)"—John C. Spiker, M. Ed., WVU Trainer (Coordinator of Athletic Training and Assistant Professor of Physical Education) and certified physical therapist; and "Responsibililties of the Team Physician on the Playing Field and Initial Evaluation of the Injured Player"—Dr. K. Douglas Bow-

Shown in the left photo during a reception at the 109th Annual Meeting of the West Virginia State Medical Association, August 18-21, at The Greenbrier in White Sulphur Springs are (from left) Mrs. Lawrence J. Pace, Princeton; Mrs. John J. Mahood, Bluefield; Dr. Vincent I. Santare of Munster, Indiana, President of the Indiana State Medical Association; and Mrs. Santare. In the right photo are Dr. Worthy W. McKinney, Beckley; Dr. Thomas E. Curtin of Washington, D. C., President of the Medical Society of the District of Columbia; and Mrs. McKinney (from left).

Shown in the left photo are a group of registered nurses at a coffee break during the third general scientific session of the State Medical Association's 109th Annual Meeting. They are (from left) Rena Pittoti, Beckley; Juliann Ritter, Charleston, Executive Director, West Virginia Nurses Association; Lynn Stout, Charleston, Associate Executive Director, West Virginia Nurses Association; Jane Stout, South Charleston; Mary K. Moats, Harrisville; and Hope Stewart, Charleston. Shown on the right during a session of the Association's House of Delegates are Drs. T. Keith Edwards, Bluefield; and Sam Milchin, Bluefield, Virginia (from left), Delegates from the Mercer County Medical Society.

ers, Jr., Morgantown orthopedic surgeon and Clinical Associate Professor, Orthopedic Surgery, WVU.

Specific athletic injuries to be discussed and the speakers are as follow:

"Acute Respiratory Problems and Thoracic Injuries"—Doctor Warden; "Abdominal Injuries"—Dr. James P. Boland, Professor and Chairman, Department of Surgery, Charleston Division, WVU; "Head Injuries"—Dr. Alfred L. Poffenbarger, Charleston neurologist and Clinical Associate Professor, Neurology, WVU and WVU Charleston Division;

"Facial Injuries"—Dr. Jacques Charbonniez, plastic surgeon, Charleston; "Soft Tissue Injuries"—Dr. David A. Santrock, orthopedic surgeon, Charleston; "Spine"—Doctor Majestro;

"Shoulder"—Dr. Robert L. Ghiz, orthopedic surgeon, Charleston, and Clinical Assistant Professor, Charleston Division, WVU; "Hand"—Dr. Richard H. Sibley, orthopedic surgeon, Charleston; "Knee"—Doctor Bowers;

"Ankle"—Dr. Robert W. Lowe, orthopedic surgeon, Huntington; and "Major Fractures and Epiphyseal Injuries"—Dr. Carl J. Roncaglione, orthopedic surgeon, Charleston, and Clinical Associate Professor, Orthopedic Surgery, Charleston Division, WVU.

Four presentations, each followed by a question-and-answer period, will make up the evening program for the public. Doctor Warden will begin with "Why Should Your Child Be Examined for Competitive Athletics?," followed by "When and

State Medical Association members, their families and guests mingled during a reception at the Association's 109th Annual Meeting. In the left photo are Mrs. Stephen D. Ward, Wheeling; John Leckie, Lexington, Kentucky; and Dr. and Mrs. Leonard Weyl of Arlington, Virginia (from left). Doctor Weyl is President Elect of The Medical Society of Virginia. Shown on the right are Mrs. Robert R. Weiler, Wheeling, then President of the Woman's Auxiliary to the West Virginia State Medical Association; Doctor Weiler; and Mrs. Norman H. Gardner of East Hampton, Connecticut (from left), President of the Woman's Auxiliary to the American Medical Association.

Why Should Sports Injuries Be Referred to a Physician?," Doctor Bowers; "Midget League Football Injuries," Doctor Lowe; and "Prevention of Sports Injuries," Mr. Spiker and Doctor Majestro.

A program on professional standards review is being developed by the West Virginia Medical Institute, Inc., for a Friday evening physicians' session to run concurrently with the public program.

It was announced previously that a panel discussion on "The Medical and Surgical Management of Upper Gastrointestinal Bleeding" will constitute the morning session on Saturday, January 29.

Dr. George J. Hill II, Professor and Chairman of Surgery and Associate Dean of the Marshall University Medical School, will discuss "Surgical Management," followed by Drs. Thomas E. Chvasta, Department of Internal Medicine, Gastroenterology, The Wheeling Clinic, "Endoscopic Diagnosis;" and Johnsey L. Leef, Jr., Charleston radiologist, "Radiographic Diagnosis." Doctor Boland will be the moderator.

Johnsey L. Leef, Jr., M. D.

Doctor Leef, a native of Richwood, is a graduate of Marshall University and received his M. D. degree in 1968 from WVU. He served a rotating internship at Harrisburg (Pennsylvania) Polyclinic Hospital in 1968-69 and a residency in diagnostic radiology at the University of Virginia from 1971 to 1974.

A Diplomate of the American Board of Diagnostic Radiology, he also is a Clinical Assistant Professor of Radiology at the Charleston Division, WVU.

Saturday Dinner Session

Dr. Robert W. Coon, Dean of the Medical School and Vice President for Health Services at Marshall University, will be the Saturday dinner speaker. The dinner session is being sponsored by the conference in lieu of the traditional Saturday-night dinner dance of the Kanawha Medical Society which has been scheduled for another weekend next year.

Sunday Morning

Sunday morning presentations will include "How People Get Well Through Psychiatry"—Dr. James R. Hodge, Akron (Ohio) psychiatrist, and Chief of Psychiatry, Akron City Hospital; "The Medical Examiner System—A New Aspect of Community Medicine for the State of West Virginia"—Dr. Irvin M. Sopher, Charleston, Chief Medical Examiner for the State of West Virginia; and a talk on tomography by Dr. John A. Goree, Professor of Radiology and Chief, Section of Neurologic Radiology, Duke University Medical Center.

Other Conference Information

Serving on the Program Committee are Drs. Ralph H. Nestmann and Joseph T. Skaggs of Charleston, Co-Chairmen; and William O. McMillan, Jr., of Charleston, and C. Carl Tully of South Charleston.

Attendance at the conference will be acceptable for Category 1 credit toward the Physician's Recognition Award for the American Medical Association; and the conference also is expected to carry prescribed credit by the American Academy of Family Physicians.

A registration fee of $20 for the entire conference, including the dinner, will be charged to all registrants except nurses, medical students, interns and residents. Dinner tickets for the latter participants, spouses and other guests will be available at the registration desk.

Further details, including additional conference speakers, will be provided in later issues of *The Journal* as the program is completed.

Drs. Mohammad A. Ullah, Oak Hill (left), and A. B. Agarwal, Bluefield, are shown in the State Medical Association's exhibits center during the Association's 109th Annual Meeting (left photo). In the center photo, Dr. and Mrs. George R. Callender, Jr. (left), Charleston, are shown with Dr. and Mrs. Arthur T. Keefe, Jr., Chestertown, Maryland. Doctor Callender was a speaker during the third general scientific session of the Association's Annual Meeting. Doctor Keefe is President of the Medical & Chirurgical Faculty of Maryland. On the right, Drs. Ross E. Newman (left), Mullens, and David F. Bell, Jr., Bluefield, are shown in the exhibit center.

30th AMA Clinical Convention December 4-7, Philadelphia

The 30th Clinical Convention of the American Medical Association will be held December 4-7 in Philadelphia.

The convention will offer to physicians a broad-based, multidisciplinary learning experience in continuing medical education. The scientific program is the largest and most comprehensive ever offered at an AMA clinical convention.

Richard E. Flood, M. D.

Frank J. Holroyd, M. D.

Some 47 postgraduate courses will be offered, along with nine general sessions, telecourses, living teaching demonstrations, and conducted exhibit rounds. In addition there will be 16 teaching luncheons and 32 "Meet the Professor" sessions.

Approximately 125 scientific exhibits will be offered on the latest developments in medicine in all areas, and some 100 commercial exhibits will present new pharmaceutical products and other new medical products and services.

The scientific program will take place in the Philadelphia Convention Center.

In conjunction with the scientific program the AMA's governing body, the House of Delegates, will convene at the Philadelphia Sheraton Hotel to conduct the official business of the association. West Virginia's Delegates to the House are Drs. Richard E. Flood of Weirton and Frank J. Holroyd of Princeton, with Drs. Harry S. Weeks, Jr., of Wheeling, and George R. Callender, Jr., of Charleston, as Alternates.

The nine general sessions will cover such topics as the National Health Planning Act; Recent Advances in Viral Vaccines; Diseases of the Thyroid; the CAT Scanner: Its Impact on Modern Diagnosis; Anaerobic Infections; Headache; Current Controversies in the Management of Breast Cancer; and Stress in Marriage.

The postgraduate courses will offer training in resuscitation of the heart attack victim, nutrition, evaluation of the dizzy patient, treatment of eye problems, blood disorders in children, heart disease, arthritis, diabetes, high blood pressure, fractures, emergency medicine, behavioral problems in children and adolescents, recent advances in cancer surgery, jaundice, mind-altering drugs, blood clots, allergies, and air pollution and its impact on health.

The "Meet the Professor" programs will include such subjects as heart valve replacement, asthma in children, hearing problems, eye problems, suicide prevention, rehabilitation of stroke patients, male infertility, breast cancer, obesity in adolescents, and dealing with hiatal hernia.

The luncheon sessions will cover topics such as participation in sports by girls, excessive fats in the blood, heart valve disorders, an update on drugs to treat infections, use of digitalis, the "Pill," behavior therapy, sudden infant death, and care of the aging skin.

The complete program for the convention was published in the October 11 issue of the *Journal of the American Medical Association.*

In the left photo, Dr. W. Alva Deardorff (left), Charleston, talks with Dr. George N. Bates, Toledo, Ohio, President of the Ohio State Medical Association, during the 109th Annual Meeting of the State Medical Association. On the right, Dr. Joseph T. Skaggs (left), Charleston, is shown with Mr. and Mrs. Doug Wall, also of Charleston. Mr. Wall is Account Supervisor for Aetna Life & Casualty, which operates the Association's professional liability insurance program.

Continuing Education Activities

Here are the continuing medical education activities listed primarily by the West Virginia University School of Medicine for part of 1976 and 1977, as compiled by Dr. N. LeRoy Lapp, Assistant Dean for Continuing Education. The schedule is presented as a convenience for physicians in planning their continuing education program. (Other national, state and district medical meetings are listed in the *Medical Meetings* Department of *The Journal.*)

The program is tentative and subject to change. It should be noted that weekly conferences also are held on the Charleston and Wheeling campuses as well as in Morgantown. Further information about these may be obtained from: Division of Continuing Education, WVU Medical Center, P. O. Box 2867, Charleston 25330; Office of Continuing Medical Education, WVU Medical Center, Morgantown 26506; or, Office of Continuing Medical Education, Wheeling Division, WVU School of Medicine, Ohio Valley Medical Center, 2000 Eoff Street, Wheeling 26003.

Nov. 4	Family Practice Day	Wheeling
Nov. 12	Jackson General Hospital Visiting Physician Program	Ripley
Nov. 18	Stonewall Jackson Memorial Hospital Visiting Physician Program	Weston
Nov. 18, 19	Practical Fluid and Electrolyte Therapy	Morgantown
Dec. 1	Pediatric Day—Current Problems in Adolescence	Morgantown
Dec. 1-3	Percutaneous Techniques Cosponsored by the Joint Socio-Economics CME Subcommittee and the Congress of Neurological Surgeons	Morgantown
Dec. 4	Nuclear Medicine	Charleston
	1977	
Jan. 27	Stonewall Jackson Memorial Hospital Visiting Physician Program	Weston
Feb. 24	Stonewall Jackson Memorial Hospital Visiting Physician Program	Weston

President Completes Appointment Of Association Committees

Here is the remaining committee which has been named by Dr. John J. Mahood of Bluefield, President of the West Virginia State Medical Association, to function during his one-year term of office. Doctor Mahood's other committee appointments were announced in the October issue of *The Journal.*

Medical Economics

Harry S. Weeks, Jr., Wheeling, Chairman; and Milton E. Nugent, Wheeling, Vice Chairman.

Sub-Committees

Federal Medical Activities: W. Alva Deardorff, Charleston, Chairman; K. Douglas Bowers, Jr , Morgantown; Everett S. Fogle, Martinsburg; J. L. Mangus, Charleston; and James T. Spencer, Charleston.

State Workmen's Compensation: Carl J Roncaglione, Charleston, Chairman; Marshall J. Carper, South Charleston; W. Alva Deardorff, Charleston; Robert L. Ghiz, Charleston; James T. Hughes, Ripley; Lawrance S. Miller, Morgantown; and Roy R. Raub, Princeton.

Blue Cross - Blue Shield Third Party: Richard O. Rogers, Jr., Bluefield, Chairman; Robert W. Bess,

Dr. Joseph A. Smith, Dunbar family physician, was elected President Elect of the West Virginia State Medical Association at the Association's 109th Annual Meeting, August 18-21, at The Greenbrier, White Sulphur Springs. President of the Kanawha Medical Society in 1967, Doctor Smith served two terms on the Association's Council, beginning in 1968. The Sutton native is a Delegate of the West Virginia Chapter to the American Academy of Family Physicians; and currently is serving a second five-year term on the Medical Licensing Board of West Virginia.

Jr., Piedmont; Donald R. Chadwick, Beckley; Albert C. Esposito, Huntington; Ernest G. Guy, Philippi; Milton J. Lilly, Jr., Charleston; John F. Otto, Jr., Huntington; Richard C. Rashid, South Charleston; and Edward C. Voss, Wheeling.

Public Welfare—Joint Conference Committee: John B. Markey, Charleston, Chairman; Charles E. Andrews, Morgantown; Clemente Diaz, Richwood; Richard E. Flood, Weirton; Lewis N. Fox, MacArthur; William H. Harriman, Jr., Terra Alta; Thomas P. Long, Man; Seigle W. Parks, Charleston; and Hiram Sizemore, Jr., Shepherdstown.

United Mine Workers Welfare and Retirement Fund: Ray A. Harron, Bridgeport, Chairman; Arthur A. Carr, Welch; John M. Hartman, Charleston; Ilona Scott, Princeton; and Robert L. Smith, Morgantown.

Vocational Rehabilitation: Robert L. Ghiz, Charleston, Chairman; George R. Callender, Jr., Charleston; Charles M. Davis, Jr., Morgantown; W. Gene Klingberg, Morgantown; Ralph S. Smith, Jr., Charleston; Robert J. Tchou, Williamson; William H. Wanger, Martinsburg; R. James Yates, Beckley; and Nicholas D. Zambos, Beckley.

Modest Increase Proposed In Insurance Premiums

While a new reclassification of physicians will have some additional impact, West Virginia doctors covered by the Medical Association's Professional Liability Insurance Program will benefit from a significant slowdown in premium increases in the 1977 policy year.

Meeting in special session in Charleston on September 26, the Association's Council and Insurance Committee accepted an annual report from Aetna Life and Casualty Company proposing, among other things, an average 5.4-per cent increase in the premium for the professional liability section of the coverage package, including the one million-dollar SCOPE, or umbrella. The increase for the 1976 policy year approached 60 per cent.

The proposed new premium structure is subject, of course, to review and approval by West Virginia's Insurance Commissioner. Aetna was prepared to file its new premium rates with Commissioner Donald W. Brown shortly after the September 26 meeting.

In other action at its special meeting, the Council:

—Reaffirmed an earlier commitment to underwrite publication of a history of the Woman's Auxiliary to the Medical Association, with the understanding that the Auxiliary will use the history as a vehicle to seek additional contributions to the American Medical Association Education and Research Foundation.

—Paid tribute to the late Dr. George F. Evans of Clarksburg, a Past President and Editor of the *Medical Journal* from 1962 until August of 1976. Doctor Evans died in University Hospital in Morgantown on August 25.

—Recognized Dr. Stephen D. Ward of Wheeling as the new Editor of the *Journal;* and also welcomed four new Council members—Drs. Wallace B. Murphy of Grafton, M. V. Kalaycioglu of Shinnston, Winfield C. John of Huntington and Carl J. Roncaglione of Charleston.

—Approved Association participation in a 10-day travel and medical seminar adventure, departing from Columbus, Ohio, on February 1 under auspices of INTRAV of St. Louis, Missouri, and involving cruise visits to several Caribbean ports and transit of the Panama Canal. This will be a substitute for an earlier-approved South American trip.

The Council and Insurance Committee engaged in a detailed discussion with Aetna officials regarding numerous features of the annual insurance program report.

These included several program changes, including the revised plan for classifying physicians; elimination of excess major medical coverage which Aetna said is available from primary health insurance carriers; and elimination from policies of a provision requiring a physician's consent prior to settlement of any claim.

In another significant development, Aetna committed itself to continue its cooperative insurance program effort with the Medical Association for an additional year beyond the current five-year agreement period which expires on January 1, 1978. In other words, Aetna has agreed to continue its current program with the Association until January 1, 1979.

It was understood at the meeting that the Medical Association headquarters staff would provide each member, through a mailing, with pertinent information regarding the continuing Aetna program, including a table setting forth in appropriate detail the proposed new premiums.

Flu Pamphlets Available To Physicians

Pamphlets on flu and the Swine Flu vaccination program are available in quantity to physicians for their patients from the West Virginia Lung Association.

The pamphlet is entitled, "Flu, 1976-77/ The Facts About Your Lungs."

Physicians may obtain the pamphlets by contacting the Lung Association at P. O. Box 4228, Charleston 25304, phone (304) 925-6664.

Dr. Seigle W. Parks Receives AAFP President's Award

Dr. Seigle W. Parks of Charleston was presented the President's Award of the American Academy of Family Physicians during the group's recent meeting held in Boston.

Doctor Parks, President of the West Virginia State Medical Association in 1965-66, was recommended to the Board of Directors by the Academy's retiring President, Dr. Carl B. Hall, also of Charleston.

Doctor Parks was honored for his long and devoted service to the cause of family practice in his native state and the nation, and for his assistance and support of Doctor Hall through many years of Academy effort and progress.

Birth Control Treatment Big Reason For Claims

This you may find hard to believe, Aetna Life and Casualty has observed, but a study of medical procedures frequently the subject of medical malpractice claims shows that treatment related to birth control leads all others.

The cases reviewed are those arising under the West Virginia State Medical Association Professional Liability Group Program. The breakdown of procedures resulting in two or more claims, as shown in a recent Aetna summary, is as follows:

Birth control, 11; diagnostic x-rays, 9; hysterectomies, 8; fractures, 6; cancer, 4; catheterizations, 4; and gallbladder operations, 3.

The allegations related to birth control procedures are varied. Four cases in the summary involve unwanted pregnancies. The patients had received IUD's and tubal ligations. A tubal ligation allegedly was performed in two cases without consent of the patient. In two other cases, the patients claim they were burned by a Bovie coagulator.

Where diagnostic x-ray procedures were the subject of a claim, it was alleged that there were two failures to take an x-ray, three cases of misreading an x-ray, one case of reading the wrong x-ray and one case where a patient's ribs were fractured when struck by the x-ray machine. In still another situation it was asserted that the man's sexual potency had been affected adversely.

Some examples of claims involving hysterectomies have reflected infections, hemorrhaging, medication error, and a sciatic nerve injury.

Fracture cases involve alleged errors in treatment, missed diagnosis, failure to seek consultation and infections. More claim dollars have been paid, or are expected to be paid, on fracture cases than in any of the other procedures discussed here. This is due in part to a large jury verdict of $344,000 in one fracture case.

The cancer cases have involved alleged failure to diagnose the ailment. The three gallbladder claims have alleged injury to the common bile duct.

"Most of the above allegations entail errors in the actual treatment rendered by the physician or surgeon. While errors in treatment will always occur, the exercise of good reason and medical judgment is necessary if future claims are to be avoided. This requires an awareness of the need to keep up with the advances of medicine, and the need to adhere to generally accepted standards of practice in the community involved," Aetna noted.

70th SMA Scientific Assembly Scheduled In New Orleans

A number of West Virginia physicians will attend the 70th Scientific Assembly of the Southern Medical Association to be held November 7-10 in New Orleans.

Dr. Richard B. Knapp of Morgantown, Professor and Chairman of the Department of Anesthesiology at the West Virginia University School of Medicine, will present a study, "The Cardiopulmonary Safety and Effects of Triazolam: A New Oral Hypnotic for the Surgical Patient," during a meeting of the Seection on Anesthesiology.

Josh C. Tunca, M. D., of Morgantown, Assistant Professor in the WVU School of Medicine and Director of Gynecologic Oncology for University Hospital, will present a case study, "Squamous Cell Carcinoma of Cervix Uteri," at a meeting of the Section on Pathology and at a joint meeting of the Sections on Gynecology, Obstetrics, Pathology and Radiology.

Dr. M. Bruce Martin of Huntington is a member of the SMA's Council; and Dr. Albert C. Esposito, also of Huntington, is a member of the Board of Trustees.

Paul F. Francke of Charleston, a junior at the WVU School of Medicine, will be one of the medical student representatives to the SMA meeting.

New Planning Role Assigned State Health Department

Gov. Arch A. Moore, Jr., has designated the West Virginia Department of Health to serve as the State's Health Planning and Development Agency under provisions of the National Health Planning and Resources Development Act (P.L. 93-641) of 1974.

The Health Department will assume authority which has been vested in the West Virginia Comprehensive Health Planning Agency, in the Office of the Governor, since 1967. The Federal legislation also empowered Governor Moore to appoint members of a new Statewide Health Coordinating Council.

The Health Planning and Development Agency will carry out decisions of the State's Health Sys-

tems Agency, the planning component under the Federal enactment, on major equipment purchases and new construction of health care facilities. It also will administer any certificate of need law enacted by the West Virginia Legislature.

The Statewide Health Coordinating Council, on which some physician representation has been anticipated, will draw up the State's health plan, which can supersede an HSA plan; is empowered to monitor the HSA; and will report to Federal authorities in Washington on its progress.

Detailed information as to how the Health Department will carry out its new responsibilities will come later, because official agreements must be developed with the U. S. Department of Health, Education and Welfare before it can begin funtioning in its new "state agency" role.

Governor Moore advised Dr. N. H. Dyer, State Health Director, that he had designated the Health Department for its new role "based on the expertise and knowledge concerning the health needs of our citizens which I believe that you have within your agency." The Governor added:

"I feel that your past experience as the administrator of the Hill-Burton Program gives you the type of understanding necessary in attempting to alleviate the health problems faced by our state.

"I am informing (HEW) Secretary David Mathews . . . of this appointment. There are certain requirements of this law which must be met in the near future, and I will look forward to receiving a report from you on the activities which will be undertaken in this regard."

WVU School Of Medicine Faculty Promotions

Of the 166 faculty promotions at West Virginia University that became effective July 1, 48 were in the School of Medicine.

The 48 promoted to the following ranks are:

Dominic A. Antico, Associate Professor, Radiology; Hiroaki Asato, Assistant Professor, Medicine; Moutassem B. Ayoubi, Clinical Assistant Professor, Pediatrics; Carl C. Barger, Assistant Professor, Radiology; Marylou R. Barnes, Professor, Neurology; William A. Beresford, Professor, Anatomy; James B. Blair, Associate Professor, Biochemistry; Richard J. Cenedella, Professor, Pharmacology;

John P. Claude, Assistant Professor, Behavioral Medicine and Psychiatry; Brenda K. Colasanti, Associate Professor, Pharmacology and Surgery; William H. Ellswood, Clinical Professor, Radiology, Charleston Division; Richard G. Frederickson, Associate Professor, Anatomy, with tenure; John Lee Fullmer, Clinical Associate Professor, Family Practice; Robert J. Gardner, Professor, Surgery;

Fernando G. Giustini, Clinical Associate Professor, Obstetrics and Gynecology; Andrew W. Goodwin, Clinical Professor, Radiology, Charleston Division; Jose A. Gutrecht, Professor, Neurology; Trevelyn F. Hall, Clinical Associate Professor, Surgery; John L. Hankinson, Assistant Professor, Physiology and Biophysics; Charles L. Harris, Associate Professor, Biochemistry; Hollister S. Harrison, Clinical Professor, Pediatrics; William G. Hayes, Clinical Associate Professor, Radiology, Charleston Division;

Michael T. Hogan, Associate Professor, Radiology; Jean D. Holter, Assistant Professor, Pathology; Thomas M. Howes, Clinical Assistant Professor, Family Practice; Roger E. King, Clinical Associate Professor, Surgery; Jehoon P. Ko, Assistant Professor, Radiology; N. LeRoy Lapp, Professor, Medicine; Verne D. McConnell, Clinical Professor, Surgery; Charles E. Meacci, Assistant Professor, Neurology; Catalino B. Mendoza, Clinical Associate Professor, Surgery;

Edwin J. Morgan, Associate Professor, Medicine, with tenure; William C Morgan, Jr., Clinical Associate Professor, Surgery; William A. Neal, Associate Professor, Pediatrics; Robert J. Nottingham, Clinical Professor, Pediatrics; Dennis O. Overman, Associate Professor, Anatomy; Thomas G. Potterfield, Clinical Professor, Pediatrics; Willard Pushkin, Clinical Professor, Medicine, Charleston Division; Raghnath R. Reddi, Associate Professor, Radiology;

James T. Spencer, Clinical Associate Professor, Surgery; Edwin P. Stabins, Clinical Professor, Pediatrics; William B. Svoboda, Associate Professor, Pediatrics, with tenure; Suzanne Tomlinson, Assistant Professor, Pathology; Pedro R. Urquilla, Associate Professor, Pharmacology; Robert W. Veltri, Professor, Microbiology and Surgery; Elizabeth R. Walker, Assistant Professor, Anatomy; Kenneth L. Wible, Associate Professor, Pediatrics; David J. Withersty, Associate Professor, Behavioral Medicine and Psychiatry.

Martinsburg VA Center CME Program Re-Accredited

The continuing medical education program of the Veterans Administration Center in Martinsburg has been re-accredited by the State Medical Association, through its Committee on Medical Education and Hospitals, effective July 14, 1976.

The CME program was granted a full, three-year accreditation. The program previously had been given a two-year provisional accreditation in July of 1974.

Scheduled to be surveyed on November 17 is the Fairmont Clinic.

Including the program now being announced, a total of nine CME programs have been approved since the voluntary accreditation program of the State Medical Association began in 1973. The other eight accredited hospitals and institutions are:

Beckley Appalachian Regional Hospital; West Virginia Academy of Ophthalmology and Otolaryn-

gology; West Virginia Chapter, American College of Surgeons; St. Mary's Hospital, Huntington; Charleston Area Medical Center; West Virginia Obstetrical and Gynecological Society; Broaddus Hospital—Myers Clinic, Philippi; and the combined program of the Ohio Valley Medical Center and Wheeling Hospital, in Wheeling.

Physicians receiving continuing education in conjunction with any of the above hospitals or organizations may claim credit in Category 1 of the American Medical Association's Physician's Recognition Award.

Hospitals and organizations interested in seeking CME accreditation may contact the headquarters of the State Medical Association.

WVU Seminar Held In Honor Of Dr. Edmund B. Flink

A seminar in honor of Edmund B. Flink, M. D., Ph. D., Chairman of the Department of Medicine at West Virginia University School of Medicine from 1960 until last June, was held on October 15 at WVU Medical Center's auditorium.

Edmund B. Flink, M. D.

Doctor Flink's former students and residents initiated the seminar in tribute to the noted clinician, teacher and researcher, who chose to relinquish his administrative duties in order to concentrate his full efforts in these three areas. Co-sponsoring the event were his colleagues from WVU and other U. S. medical centers and hospitals and the School of Medicine's Office of Continuing Education.

Before Doctor Flink came to WVU as first Chairman of the Department of Medicine and developed its strong academic program, he was a faculty member at the University of Minnesota Medical School for 15 years. While at Minnesota, he conducted a study of hemoglobinemia, was Chief of the Medical Service at Minneapolis Veterans Hospital, spent a sabbatical leave at Harvard University, served as Visiting Professor at Seoul National University in Korea, began his research on magnesium deficiency including its role in chronic alcoholism, and participated in early circadian rhythm studies.

More than 200 physicians have had all or a significant part of their residency training in internal medicine under Doctor Flink's tutelage. Many of them attended the seminar, which was followed by a banquet at Lakeview Inn and Country Club, and several made presentations during the scientific program.

Medical Meetings

Nov. 3-6—Am. Society of Cytology, Houston.

Nov. 4-7—Medical Society of Virginia, Williamsburg.

Nov. 7-10—Southern Medical Assn., New Orleans.

Nov. 12-13—Western Pa.-W. Va. Regional Meeting, ACP, Pittsburgh.

Nov. 15-19—Am. Heart Assn., Miami Beach.

Dec. 1-4—National Perinatal Assn., St. Louis.

Dec. 4-8—AMA Clinical, Philadelphia.

Dec. 5-9—Am. Academy of Dermatology, Chicago.

Dec. 6-8—Southern Surgical Assn., Palm Beach, Fla.

1977

Jan. 17-21—Southeastern Breast Oncology Conference, Miami.

Jan. 20-22—Neurosurgical Society of the Virginias, Hot Springs, Va.

Jan. 28-30—Tenth Mid-Winter Clinical Conference, Charleston.

Jan. 28-30—AMA Congress on Medical Education, Chicago.

Feb. 3-8—Am. Academy of Orthopaedic Surgeons, Las Vegas.

Feb. 28-March 3—Am. College of Cardiology, Philadelphia.

March 24-27—ASIM, Kansas, Mo.

March 28-31—ACS, Los Angeles.

April 17-21—Am. Academy of Pediatrics, New Orleans.

April 18-21—ACP, Dallas.

April 20-22—Medical & Chirurgical Faculty of Md., Cockeysville, Md.

April 24-27—W. Va. Academy of Ophthal. & Otolaryn., White Sulphur Springs.

April 25-30—Am. Academy of Neurology, Atlanta.

May 4-7—W. Va. Chapter, ACS, White Sulphur Springs.

May 15-18—Am. Thoracic Society, San Francisco.

May 15-19—Ohio State Medical Assn., Columbus.

June 18-23—AMA, San Francisco.

Aug. 24-27—110th Annual Meeting, W. Va. State Medical Assn., White Sulphur Springs.

Nov. 6-9—Southern Medical Assn., Dallas.

The West Virginia Medical Journal

Vol. 72, No. 12 December, 1976

Asbestosis In West Virginia And Eastern Ohio

John A. Bellotte, M. D.; and Dominic J. Gaziano, M. D.

Abstract

Despite distinctive patterns of pathologic manifestation to asbestos in certain parts of the world, asbestosis in West Virginia and eastern Ohio bears a similar prevalence, clinical features, and prognosis as previously reported studies in the United States.

The cigarette seems to have formed a firm alliance with asbestosis to help hasten the disease process and clinical demise, both through respiratory insufficiency and a multiplicative increase of neoplastic risk.

Asbestosis means fibrosis of the lung due to the inhalation of the dust of naturally occurring silicates which are known as asbestos.[1] The number of asbestos workers and the use of asbestos in industry has increased geometrically in the past 15 years.[2] Asbestos is a common environmental contaminant that causes varied pathological manifestations depending on the geographic location and the type and degree of asbestos exposure.[3]

In some areas surveys have shown an increased amount of pleural and diaphragmatic calcification,[4] while other surveys have shown a conspicuous absence of these findings.[5] An increased risk of carcinogenesis has been shown in many studies; but, even this increased risk seems to vary from one location to another, possibly due to other interacting environmental or occupational factors.[6]

Because of the variability of pathological expression caused by this occupational hazard, a study was undertaken to characterize the asbestos disease process in a group of workers from the West Virginia and Eastern Ohio area.

The Author

- **John A. Bellotte, M. D., Pulmonary Fellow, Charleston Area Medical Center, Charleston, West Virginia; and Dominic J. Gaziano, M. D., Associate Clinical Professor of Medicine, Charleston Division, West Virginia University Medical Center.**

Materials and Methods

Study population: This study was conducted on a group of 60 workers from the International Association of Heat and Frost Insulators and Asbestos Workers. A survey of the types of insulating material to which members had been exposed over the past 20 to 30 years revealed a rather extensive list of materials: amosite blanket, calcium salicate, asbestos cement, cloth and paper, fiberglass and kaolin, to name a few of the more predominant ingredients.[7]

Study design: Each subject was questioned regarding his occupation, smoking habits and general medical history. Physical examination was then performed.

Pulmonary function studies: Pulmonary function tests were performed using a Collins spirometer. The measurements included the forced expired vital capacity (FVC), forced expiratory volume in one second (FEV_1) and the $FEV_1/FEV\%$. An FVC less than 80 per cent of the predicted value, and/or an $FEV_1/FVC\%$ less than 75 per cent were considered abnormal.

Chest roentgenograms: Standing posteroanterior and left lateral standard chest roentgenograms were taken. Each roentgenogram was in-

terpreted by a chest physician using the UICC/Cincinnati classification system for staging and typing.[8]

Diagnostic criteria: In this study the diagnostic criteria used are essentially those proposed by Murphy:

(1) Subjective dyspnea on exertion (one flight of stairs).

(2) Abnormal pulmonary function — with FEV decreased to less than 80 per cent of predicted normal.

(3) Clubbing of fingernails.

(4) Basilar rales.

(5) Chest x-ray consistent with asbestosis.

For the diagnosis of asbestosis three of the five criteria must be present along with a history of exposure to the asbestos group of minerals.[9]

Results

Of the 60 subjects, eight (13 per cent) fulfilled the criteria of the diagnosis of asbestosis. Four of the workers were in a severe category by having four or all five criteria (Table 1).

Four patients had three of the five criteria and fell into a moderate category (Table 2). Of these eight patients with definite asbestosis, six (75 per cent) were smokers. All of these subjects had prolonged exposure, that is, greater than 20 years. Average total number of years of exposure was 30.

Nine (17 per cent) of the remaining 52 subjects had two of the criteria present, so that asbestosis was a strong consideration (Table 3). Three (33 per cent) of these nine patients had over 20 years of exposure in the insulation industy. The two criteria most frequently present in this group were the abnormal chest roentgeno-

TABLE 1

Severe Asbestosis Group

Pt. #	*Age*	*X-ray*	*Sx*	*Signs*	*PFT*	*Cig*	*Exp*
8	50	2/2 t. c.o.-I pl. th-I	DOE	Clubbing Rales	FEV-78%	+	30
12	48	2/1 t.	DOE	Rales	FEV-61%	+	25
28	63	2/2 t. Diaph. Calcif I, pl. th-III	DOE	Rales	FEV-57% FEV_1-72%	+	45
1	56	3/3-A-u c.o.-III pl. calcif I	DOE	Rales Clubbing	FEV-75% FEV_1-46%	+	39

Cig.—cigarette; Exp.—exposure; pl. cal—pleural calcification; pl. th—pleural thickening; CP—costophenic; c.o.—cardiac outline; DOE—dyspnea on exertion; FEV—forced expiratory volume; FEV_1—FEV in 1 second; id—ill defined; R—right; L—left; Sx—symptoms; N—normal.

TABLE 2

Moderate Asbestosis

Pt. #	*Age*	*X-ray*	*Sx*	*Signs*	*PFT*	*Cig*	*Exp*
16	51	2/1 t pl cal III		Rales	FEV-91%	—	30
15	44	2/2 pl. reaction I	DOE	Rales	FEV-106%	+	23
32	54	2/1 x pl. reaction I CP-blunting	DOE	Rales	FEV-94% FEV_1-75%	+	25
54	49	1/2 s		Rales	FEV-42%	—	28

Cig.—cigarette; Exp.—exposure; pl. cal—pleural calcification; pl. th.—pleural thickening; CP—costophenic; c.o.—cardiac outline; DOE—dyspnea on exertion; FEV—forced expiratory volume; FEV_1—FEV in 1 second; id—ill defined; R—right; L—left; Sx—symptoms; N—normal.

TABLE 3

Possible Mild Asbestosis

Pt. #	*Age*	*Exp. Yrs.*	*Cig.*	*X-ray*	*PFT*	*Signs & Sx*
18	27	9	+	1/1 q	N	DOE
19	48	18	+	1/1 s calcif. diaphragm	N	Rales
23	48	28	—	1/2 t	N	DOE
33	34	15	+	1/1 s	N	DOE
46	46	26	+	1/2 t pl. rx. I	FEV-80%	
48	43	24	+	1/1 s pl. th. II	FEV-86%	Rales
51	44	17	Cigar	1/1 t c.o. I	FEV-83%	Rales
52	46	17	+	1/1 t	N	DOE
58	39	14	+	1/0 s	FEV-75%	

Cig.—cigarette; Exp.—exposure; pl. cal—pleural calcification; pl. th.—pleural thickening; CP—costophenic; c.o.—cardiac outline; DOE—dyspnea on exertion; FEV—forced expiratory volume; FEV_1—FEV in 1 second; id—ill defined; R—right; L—Left; Sx—symptoms; N—normal; Rx.—reaction.

TABLE 4

Normal Patients with Decrease in FEV Greater than 250 cc

Pt. #	*Age*	*Exp. Yrs.*	*Cig.*	*X-ray*
4	30	7	—	0
10	29	9	+	0/1 s
11	27	8	—	0/1 s
14	37	20	—	0
17	50	25	—	0
22	39	15	+	0
26	27	6	+	0
40	29	7	+	0
50	35 DOE	9	+	0

Cig.—cigarette; Exp.—exposure; Pl. Cal—pleural calcification; Pl. th.—pleural thickening; CP—costophenic; c.o.—cardiac outline; DOE—dyspnea on exertion; FEV—forced expiratory volume; FEV_1—FEV in 1 second; id—ill defined; R—right; L—Left; Sx—symptoms; N—normal.

TABLE 5

Normal Patients with Decrease in FEV Less than 250 cc

Pt. #	*Age*	*Exp. Yrs.*	*Cig.*	*X-ray*
56	50	26	+	0
42	28	10	—	0
34	33	15	+	0/1 s
6	39	15	+	0

Cig.—cigarette; Exp.—exposure; Pl. Cal—pleural calcification; Pl. th.—pleural thickening; CP—costophenic; c.o.—cardiac outline; DOE—dyspnea on exertion; FEV—forced expiratory volume; FEV_1—FEV in 1 second; id—ill defined; R—right; L—Left; Sx—symptoms; N—normal.

gram consistent with asbestosis and either rales or dyspnea on exertion.

Of the 17 patients (28 per cent) with either definite or possible asbestosis, 11 had asbestos exposures of greater than 20 years.

The subjects were then divided into smoking and non-smoking groups to determine what influence smoking had on the development of asbestosis. By reviewing the tables, it was noted that smoking tended to be associated with an increased number of diagnostic criteria and a more severe disease process.

Forty-three patients fell into a normal category (Tables 4, 5, 6). The normal population was then divided into those with a mild decrease in FEV and those with a normal FEV. An attempt to associate a mild decrease in FEV with the duration of asbestosis exposure in this group was non-revealing.

As expected, more advanced radiographic and pulmonary functional abnormalities occurred in the group with the longest exposure. The initial symptom of asbestosis, dyspnea on exertion, besides correlating with duration of exposure, was also strongly associated with a positive smoking history.

Discussion

The diagnosis of asbestosis usually requires a history of exposure to asbestos plus three of five other criteria previously listed. However, for epidemeologic purposes, these criteria may be too restrictive.[9] Nine of these subjects had two of the criteria without any other medical history

TABLE 6

Normal Patients Without A Decrease in FEV

Pt. #	*Age*	*Exp. Yrs.*	*Cig.*	*X-ray*
2	24	6	—	0
7	33	13	+	0/1
9	34	19	+	0
20	31	8	+	0
21	48	20	+	0
25	26	7	—	0
27	36	21	+	0/1 s
29	26	8	—	0/1 s
30	24	3	+	0
31	28	9	—	0
35	26	8	+	0
36	30	11	+	0
37	37	15	—	0
38	39	9	+	0/1 t
43	43	25	—	0/1 s
44	33	13	—	0
45	38	18	+	0/1 s
49	38	8	+	0/1 s
53	47	17	+	1/1 q
59	32	14	+	1/0 t
60	41	13	+	1/0 s
57	35	17	+	0/1 s
3	37	17	—	1/1 s
5	50	28	—	1/1 s pl. rx. I
13	40	16	+	1/1 t pl. th. I
24	36	19	—	1/0 s id R diap.
39	57	28	+	1/1 t pl. rx. I
41	33	16	—	1/1 t pl. th. I
47	28	7	+	1/1 s
55	41	18	+	1/1 s

Cig.—cigarette; Exp.—exposure; Pl. Cal—pleural calcification; Pl. th.—pleural thickening; CP—costophenic; c.o.—cardiac outline; DOE—dyspnea on exertion; FEV—forced expiratory volume; FEV_1—FEV in 1 second; id—ill defined; R—right; L—left; Sx—symptoms; N—normal; Rx—reaction.

to account for the noted abnormality except their long exposure to the insulation industry.

A minimum latent period of 10 years of asbestos exposure is felt to be necessary before asbestosis can be detected.[11] None of these subjects contradicts that statement.

The average age of death from asbestosis has gradually risen over the past 40 years to about 60.[10] The average age of the asbestos group in this study is 52.

The prevalence of asbestosis in this study of those with over 20 years exposure was 47 per cent. which is comparable with other studies in the literature.[11]

Shortness of breath on exertion was the salient clinical feature and end-inspiratory crackling rales was the most predominant physical finding in this group, which is in agreement with other reported studies. Clubbing was found in two patients with a more advanced state of disease. Calcification of the pleura and diaphragm were noted on several patients.

Pulmonary functional abnormalities of decreased vital capacity were seen in the advanced state of the disease process, but did not correlate well with duration of exposure in the normal subjects.

There is an increased risk of bronchial carcinoma and gastrointestinal neoplasm in asbestos workers which appears to be dose-related.[4] It is interesting to point out that the opportunity to do this study was brought about by the death from bronchial carcinoma of an insulation worker in this Asbestos Worker's union. No other clinically apparent malignancies were found in this small group of workers. The small number in this report precludes any estimates of malignancy-risk for this group.

Liver Biopsy With The Vim Tru Cut Needle

Rafael Antonio Ortiz, M. D.; P. H. Garcia Pont, M. D.; Pedtro Lorenzi, M. D.; Donald Vazquez, M. D.; Jorge Melendez, M. D.; Arturo Acosta, M. D.; And Carlos Rubio, M. D.

Abstract

One-hundred-and-twenty patients with liver disease were biopsied with the new disposable Vim Tru Cut Needle. The effectiveness and safety of the device was evaluated. No complications were observed and the needle yielded histologic diagnosis in 96.6 per cent of the patients with whom it was used. The use of this needle appears to be a safe and simple technique with a high diagnostic yield for the acquisition of liver tissue specimens.

The Authors

- **Rafael Antonio Ortiz, M. D.; P. H. Garcia Pont, M. D.; Pedtro Lorenzi, M. D.; Donald Vazquez, M. D.; Jorge Melendez, M. D.; Arturo Acosta, M. D.; and Carlos Rubio, M. D., all from the Department of Medicine, Section of Gastroenterology, Veterans Administration Hospital, San Juan, Puerto Rico; and the University of Puerto Rico School of Medicine.**

Background

SINCE the introduction of the Menghini needle,[1] percutaneous liver puncture has gained an extraordinary importance in the diagnosis and study of liver disease. Although different needles have been used, the yield of adequate specimens is unpredictable, particularly if the underlying disease is liver cirrhosis. Frequently in cases where dense fibrosis is present, the tissue sample is either very small or fragmented.[1,6]

A satisfactory biopsy requires a reasonable length of tissue. We have utilized the modified disposable Vim Silverman Needle (Vim Tru Cut, manufactured by Travenol Laboratory, Puerto Rico) and have reported here on its usefulness in obtaining suitable liver tissue adequate for a biological diagnosis. This needle has been used for prostatic,[2,3] kidney,[4] and recently, lung,[5] biopsies with success.

Our experience dates back to 1970. Statstical data were not recorded prior to 1973, but we have now done more than 300 biopsies without significant complications. This observation prompted us to demonstrate further the effectiveness and safety of such a device with a prospective study in 120 patients in whom liver disease was clinically suspected.

Experience with the same needle was previously published by Rake[6] in a series of 50 consecutive patients; however, no further reports have appeared in the medical literature to confirm this limited experience.

Materials and Methods

In the period from June, 1974, to July, 1975, 120 patients with liver disease were selected for this study. The patients were admitted to the Gastrointestinal Unit at the Veterans Administration Hospital, San Juan, Puerto Rico. The PT, PTT and platelets count were obtained before the procedure, and no pre-medication was administered to the patients.

A six-inch-long needle (Tru Cut, Figure 1) consisting of a cannula and a trocar having a two-cm. notch on one side, was introduced into the liver substance by intercostal approach. The outer diameter of the cannula is 2.032 mm. The trocar and cannula were advanced and their position verified. The trocar was gently pushed and held in its position, and then the cannula was advanced to cut the liver while the patient

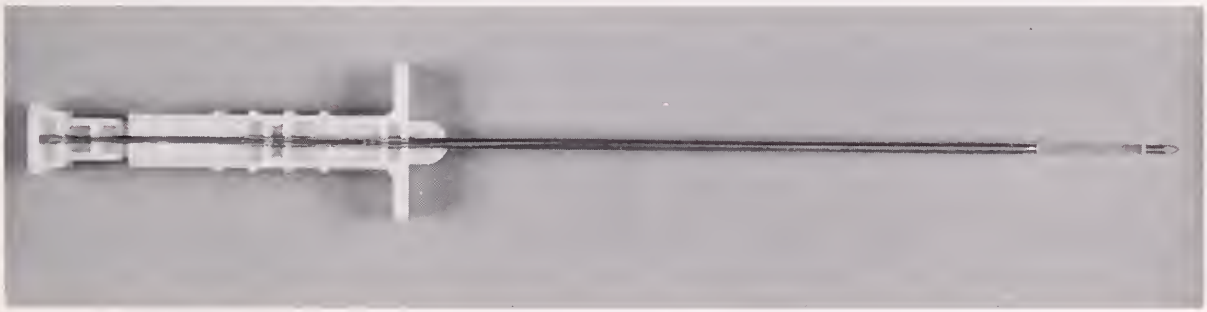


Figure 1. A view of the entire Vim Tru Cut needle with open trocar showing the specimen notch.

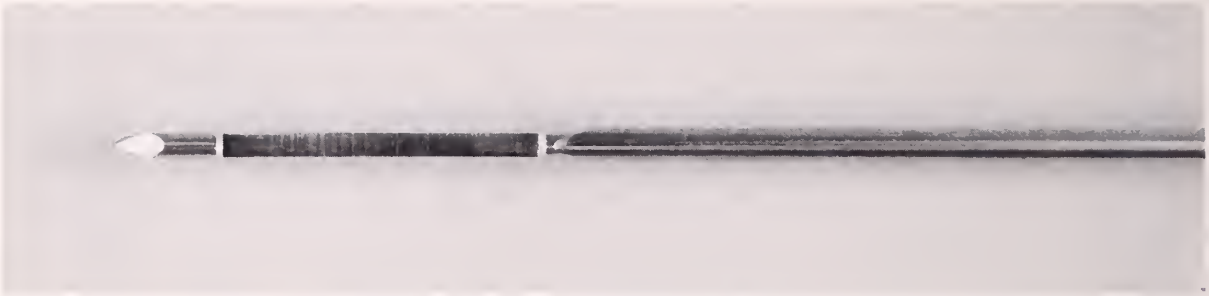


Figure 2. A closer view of the Vim Tru Cut needle illustrating the closed specimen notch.

held his breath. The duration of the intrahepatic phase averaged about three to five seconds. All of the specimens obtained consisted of a rectangular piece of tissue with a mean length of 1.8 cm. (range 1.6 to 2 cm.). After the procedure, patients were followed up by serial hematocrit determinations, monitoring of vital signs every 30 minutes for four hours and placement of the patient in the right lateral position. Analgesics were ordered in case of discomfort in the area of puncture.

Results

Tables 1 and 2 show the results from patients who underwent this procedure. In 116 patients, tissue was obtained for microscopic study (96.6 per cent). In four cases, no tissue was obtained and these were considered biopsy failures (3.3 per cent) after one attempt. This included patients in whom skin or muscle were obtained. Three out of four of these patients were obese.

Twenty cases (17 per cent) described a mild discomfort in the right upper quadrant and one patient developed transient hypotension; however, the blood pressure became stable in a few minutes and the hematocrit remained unchanged during the 12 hours of close observation immediately after the procedure and during the following days.

TABLE 1

Result of Liver Biopsy In 120 Patients

Pathological Diagnosis	116
Complications	0
Failures	4
Right Upper Quadrant Discomfort	20
Transient Hypotension	1

Discussion

Our experience with 120 biopsied cases confirms previous reports[7] in which the morbidity and mortality of liver biopsies were very low when performed by trained clinicians. We had no mortality and no complications. The major advantage of this needle is the ease in which a good size specimen is obtained, i.e., a length of

TABLE 2

Histological Diagnosis in 120 Patients With Liver Disease

Cirrhosis	29
Viral Hepatitis	35
Alcoholic Hepatitis	9
Fatty Liver	16
Obstructive Jaundice	2
Hepatic Metastasis	3
Sarcoidosis	5
Hepatoma	3
Chronic Active Hepatitis	9
Persistent Hepatitis	6
Schistosomiasis	3
Total	120

Figure 3. A magnified view of the needle's terminal portion showing a lateral aspect of the cannula and the specimen notch in an opened position.

1.8 cm. (range 1.6-2 cm.). It yielded 96.6 per cent histological diagnosis. In five cases of suspected sarcoidosis, the biopsy confirmed the diagnosis. In 29 patients with cirrhosis, adequate tissue was obtained in all. Schistosoma granulomata and metastatic lesions were each detected in three instances.

In view of the effectiveness in obtaining an adequate amount of tissue which facilitates a histological diagnosis, and the relative safety of this needle, we propose its use, particularly in conditions where granulomas or metastasis are suspected and especially in the detection of fibrosis.

Acknowledgment

The authors gratefully acknowledge the assistance of Vicken V. Kalbian, M. D., for reviewing the manuscript.

References

1. Menghini, G.: Bastroenterology. 35:190, 1958.
2. Mellinger, G. T., and Blackard, C. E.: J. Urology. 99:228, 1968.
3. Schwarz, H.; Hendricks, F. G., and Murphy, G. P.: J. Urology. 99:230, 1968.
4. Alderman, M. H., and Becker, E. L.: JAMA. 203:988, 1968.
5. Vitums, V. C.: Chest. 62:717, 1972.
6. Rake, M. O.; Ansell, I. D.; Murray-Lyon, I. M., and Williams, R.: Lancet. 2:1283, 1969.
7. Terry, R.: Brit. Med. J. 1:1102, 1952.

Manuscript Information

Manuscripts to be presented for publication in *The West Virginia Medical Journal* should be typewritten, triple-spaced, on one side only of firm (no onion skin or flimsy), standard letter sized (8 1/2 by 11 in.) white paper. Wide margins (at least 1 1/4 in. on left) should be left free of typing. On the first or title page should be shown the title of the article, the name (or names) of the author, and his degrees. Pages should be numbered consecutively, the page number being shown in the right upper corner along with the surname of the author.

A short abstract summarizing the manuscript should be included. This should be typed in double space on a separate page.

Authors are requested to submit a carbon copy with the original.

Illustrations should be numbered and their approximate locations shown in the text. Each should be identified by placing on its back the author's name, its number and an indication of its "top." Drawings and charts intended for reproduction should be done in black (India) ink on pure white. Photographs should be on glossy paper and minimum of about 5 by 7 in. in size. A legend should be provided for each illustration and, preferably, attached to it.

All scientific material appearing in *The Journal* is reviewed by the Editorial Board. Manuscripts should be mailed to The Editor, West Virginia Medical Journal, Box 1031, Charleston, W. Va. 25324.

Spontaneous Recanalization Of Vas Deferens

Bhasker R. Pujari, M. D.; and Gopal M. Pardasani, M. D.

Abstract

A case of spontaneous recanalization of the divided vas deferens is presented. The literature has been reviewed with special reference to its pathogenesis, relationship to various operative techniques and time interval. Recommendations are made to avoid the ramifications of such an event.

The Authors

- **Bhasker R. Pujari, M. D., Division of Urology, Department of Surgery, St. Luke's Hospital, Bluefield, West Virginia; and Gopal M. Pardasani, M. D., Department of Pathology, Princeton Community Hospital, Princeton, West Virginia.**

THE modern patient, seeking vasectomy for permanent sterilization, seems to be well informed of the occasional failure of the operation. But little is he aware of the spontaneous recanalization of the divided vas.

Case Report

A 33-year-old white male had a vasectomy three and one-half years ago. He did not report for a follow-up and failed to have a postvasectomy seminogram carried out. His wife's pregnancy made him seek a consultation with one of us. Examination of the scrotum revealed an uninterrupted vas deferens; however, a palpable nodule was observed on both sides. A seminogram showed one to two motile sperms per high power field. A repeat vasectomy was performed. Segments of vas, including the nodue, were excised. The cut ends were doubled back and ligated with 000 Ethiflex and a fascial barrier was interposed between the two ends. A seminogram one and six months after vasectomy showed total absence of sperms.

Serial sections were taken through the excised segments and nodules. Histological examination showed multiple epithelial lined channels in the granulomatous nodule, with spermatozoa seen in the lumina (Figures 1-3).

Discussion

Spontaneous recanalization of the vas, following bilateral vasectomy, has an incidence of about one in 100.[1-3] Not enough attention, however, has been focused on its pathogenesis, relationship to operative technique, and time interval.

Spontaneous recanalization occurs through the medium of granulation tissue.[2,4,5] This may be due to leakage of sperm,[2] haematoma, infection, or foreign body reaction.[4,5] The genesis of spermatic granuloma is highly controversial. It is generally believed to be due to leakage of sperms at the ligature site.[2] After vasectomy, the lumen of the vas dilates due to continued internal pressure.[6] This dilatation reaches a maximum 75 days after operation and does not regress appreciably.[7] The ligature either cuts through or dissolves, resulting in extravasation of spermatozoa.[2] But Kwart & Coffey have shown in their animal experiments that neither sperm leakage nor suture material is a necessary predisposing factor in granuloma formation.[8] They noted 100 per cent occurrence of granulomas both in prepuber-

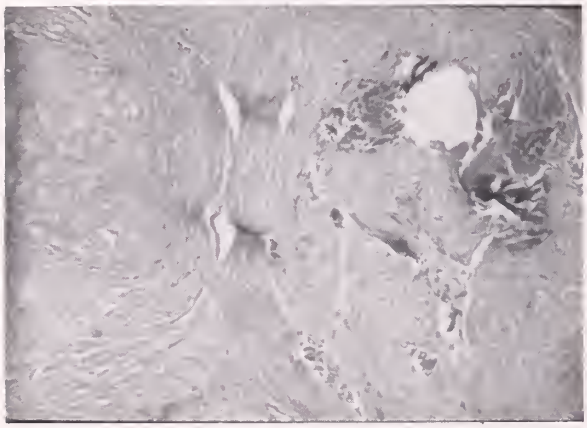


Figure 1. Vas deferens showing organization process with recanalization. Suture material identified in the upper right corner. (Magnification x40)

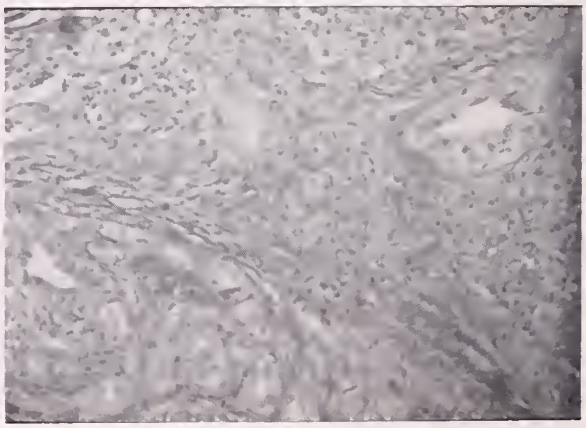


Figure 2. Variable sized channels showing epithelialization. Pools of sperms present in left upper corner. (Magnification x100)

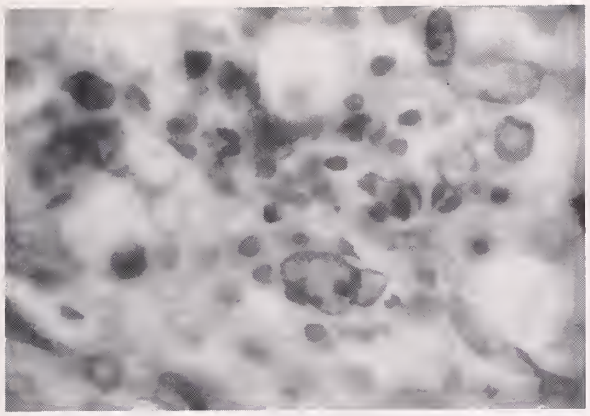


Figure 3. Many 'heads' of sperms are seen; some of them are lying in the channels. (Magnification x1000)

tal and postpubertal animals, whether the vas was occluded by fulguration or ligation. The low incidence of 5-18 per cent sperm granuloma in various clinical reports[2,9,10] is perhaps due to the decrease in the size of granulomas with time,[11] and also that most are painless and undiagnosed.[12] Whatever it is, histological studies have shown that multiple, epithelial lined channels develop in the granulation tissue establishing communication between the two cut ends of the vas, and some may even end blindly.[2,4] In fact, Alken and Ferner, and Pugh and Hanley suggest that the more granulation tissue, haematoma, infection or foreign-body reaction present, the better is the chance for recanalization.[4,5]

Various techniques of vasectomy have been described, ranging from ligation of the vas without incising the skin to resection of the entire scrotal vas.[13,14] Removal of a segment of vas and ligation of the cut ends is widely accepted.[15] The cut ends may be ligated with silk,[16] cotton,[17] or tantalum clips.[3,18] Doubling back the cut ends is recommended.[19] Many authors ignore the sheath of the vas, while others use it as a barrier between the cut ends.[15,16] Schmidt does not ligate the cut ends,[2] although this is how spermatic granulomas are experimentally produced,[20,21] but he enthusiastically favors their fulguration and separation by a fascial barrier.[2] The variety of techniques suggests that a uniformly successful operation is yet to be evolved. Indeed, a thorough survey of the literature shows incidence of recanalization with most known techniques used singularly or in combination,[19] but occurrence is more frequent with simpler procedures.[22] Marshall and Lyon recorded two recanalizations despite excising a segment of vas and fulgurating and ligating the cut ends with silk after each was turned back.[23] Strode found that recanalization did not occur if a fascial barrier was interposed between the cut ends.[24] We advocate a meticulous surgical technique, excision of a short segment of vas, doubling back the cut ends and ligation with 000 Ethiflex, and interposition of a fascial barrier. We have *not* encountered any recanalizations in 475 vasectomies performed with this technique.

It is very difficult to estimate when recanalization occurs. Spermatic granulomas, however, have been noted two months to six years after vasectomy.[2] Our case of recanalization was discovered after three and one-half years; but others have been reported after two and one-half months to 10 years after vasectomy.[2,25,26] With such a wide range of time intervals, one cannot make any specific recommendations regarding postvasectomy follow-up. We feel that the surgeon should explain to both the husband and his wife, at the initial interview, the distinct possibility of recanalization, and that the most reliable technique will be employed to prevent it. Postoperative seminograms should be performed at monthly intervals until two negative specimens have been obtained, then at four-month intervals for a year, and at yearly intervals up to three years. Any reappearance of sperm,[23] infection, haematoma or granuloma formation,[2,4,5] should call for a more stringent vigil over an extended period.

References

1. Livingstone, E. S.: Vasectomy. Canad. Med. Assoc. J. 105:1065, 1971.
2. Schmidt, S. S.: Technics and Complications of Elective Vasectomy: The Role of Spermatic Granuloma in Spontaneous Recanalization. Fertil. & Steril. 17:467, 1966.
3. Moss, W. M.: Sutureless Technic for Bilateral Partial Vasectomy. Fertil. & Steril. 23:33, 1972.
4. Alken, C. E., and Ferner, H.: Morphologic Study of Spontaneous Restoration of Freedom of Passage in the Spermatic Cord of Humans after Section and Ligation. Urol. Int. 10:66, 1960.
5. Pugh, R. C. B., and Hanley, H. C.: Spontaneous Recanalization of the Divided Vas Deferens. Brit. J. Urol. 43:340, 1971.
6. Schmidt, S. S.: Anastomosis of Vas Deferens: An Experimental Study III: Dilatation of the Vas Following Obstruction. J. Urol. 81:206, 1959.
7. Singh, R. C.: Thesis submitted to Vikram University, 1958.
8. Kwart, A. M., and Coffey, D. S.: Sperm Granulomas: An Adverse Effect of Vasectomy. J. Urol. 110:416, 1973.
9. Klapproth, H. J., and Young, I. S.: Vasectomy: Vas Ligation and Vas Occlusion. Urology. 1:292, 1973.
10. Banerji, T. P.: A Study of Male Sterilization at Kampur: Report on 202 Cases of Vasectomy. J. Indian Med. Assoc. 36:578, 1961.
11. Smith, G.: The Effects of Ligation of the Vasa Efferentia and Vasectomy on Testicular Function in the Adult Rat. J. Endocr. 23:285, 1962.

12. Schmidt, S. S.: Complications of Vas Surgery, Control of Male Fertility. San Francisco, Harper & Row Publishers, 1975, p. 82.

13. Jhaver, P. S.: Surgery of the Epididymis and Vas. J. Indian Med. Assoc. 44:591, 1965.

14. Szkodny, A.: A Simplified Method of Ligating the Vas Deferens. Pol. Przegl. Chir. 36:1309, 1964.

15. Flocks, R. H., and Culp, D. A.: Surgical Urology, 4th Edition, Chicago, Year Book of Medical Publishers Inc., 1975, p. 508.

16. Freund, M., and Davis, J. E.: Disappearance Rate of Spermatozoa From the Ejaculate Following Vasectomy. Fertil. & Steril. 20:163, 1969.

17. Vyas, B. K., and Trivedi, D. R.: A Singlehanded Method of Vasectomy. J. Indian Med. Assoc. 49:28, 1967.

18. Dodds, D. J.: Reanastomosis of the Vas Deferens. JAMA. 220:1498, 1972.

19. Blandy, J.: Vasectomy. Brit. J. Hospital Medicine. 9:319, 1973.

20. Russel, M., and Friedman, N. B.: Studies in General Biology of Sperm: Experimental Production of Spermatic Granuloma. J. Urol. 65:650, 1951.

21. Mullaney, J.: Experimental Production of Spermatic Granuloma in Rats. Nature. 194:487, 1962.

22. Rolnick, H. C.: Regeneration of the Vas Deferens. J. Urol. 9:188, 1924.

23. Marshall, S., and Lyon, R. P.; Variability of Sperm Disappearance from the Ejaculate After Vasectomy. J. Urol. 107:815, 1972.

24. Strode, J. E.: A Technique of Vasectomy for Sterilization. J. Urol. 37:733, 1937.

25. Bunge, R. B.: Bilateral Spontaneous Reanastomosis of Ductus Deferens. J. Urol. 100:762, 1968.

26. Franzblau, A. H.: Spontaneous Reanastomosis of the Vas Deferens. Rocky Mt. Med. J. 70:35, 1973.

Sports Ignore Needs Of Players?

THE needs and values of the participants in sports in America have been adulterated at all levels in recent years, declares a new book on sports by the American Medical Association.

The book is *The Humanistic and Mental Health Aspects of Sports, Exercise and Recreation.* In the introduction it declares:

"One has only to recall reports of harsh conditioning methods, a scarcity of programs for the disabled, drug abuse, excessive parental-coach pressure in youth programs, unfair practices used to discourage female participation, amorphous leisure education programs for the retired, unsportsmanlike acts, and discrimination in various forms, to realize that current sports forms are no longer meeting the needs of the participants."

A Continuing Medical Education Event!

The Tenth Mid-Winter Clinical Conference

Daniel Boone Hotel
Washington and Capitol Streets, Charleston, W. Va.

January 28-30

Such sponsors and participants as the West Virginia State Medical Association; American Diabetes Association, West Virginia Affiliate; American Heart Association, West Virginia Affiliate; West Virginia Lung Association and its Kanawha County Council; West Virginia Chapter, American Academy of Family Physicians; West Virginia University School of Medicine and its Alumni Association; West Virginia Chapter, American Society of Internal Medicine; West Virginia Medical Institute, Inc.; West Virginia Division, American Cancer Society; Kanawha Medical Society and its Woman's Auxiliary; Section on Orthopedic Surgery, West Virginia State Medical Association; and West Virginia Chapter, American Academy of Pediatrics.

Watch The Journal For Program Details

THE PROGRAM CO-CHAIRMEN again are Ralph H. Nestmann, M. D., and Joseph T. Skaggs, M. D., both of Charleston. Also on the Program Committee are William O. McMillan, Jr., M. D., of Charleston, and C. Carl Tully, M. D., of South Charleston.

THE REGISTRATION FEE of $20 for the entire conference, including the Saturday night dinner, will be charged all registrants except nurses, medical students, interns and residents. Dinner tickets for the latter participants, spouses and other guests will be available at the registration desk. Advance registration is requested, and please make checks payable to "WEST VIRGINIA STATE MEDICAL ASSOCIATION."

ACCREDITATION: Attendance will be acceptable for Category 1 credit toward the Physician's Recognition Award of the American Medical Association; and the program also is expected to carry prescribed credit by the American Academy of Family Physicians.

OVERNIGHT ACCOMMODATIONS: Physicians should communicate directly with the reservation manager of the hotel or motor inn of their choice, with the conference headquarters hotel setting aside rooms for registrants.

FOR ADVANCE REGISTRATION, please complete the form below and mail to: WEST VIRGINIA STATE MEDICAL ASSOCIATION, P. O. BOX 1031, CHARLESTON, W. VA. 25324.

- -

Please register me for the Tenth Mid-Winter Clinical Conference in Charleston, W. Va., January 28-30, 1977. My $20 registration fee is (is not) enclosed.

Name (please print) _____ *Specialty* _____

Address _____ *City* _____

A message from . . .

The President

WINTER IS NOT ALL BAD

It's that time of year again, with bad weather—represented by snow, ice, wind, rain and short episodes of daylight—soon to confine us to the hearthside and comfort of our homes.

That's not all bad, because it provides some time for reflection on our good fortune as well as our bad, and what life and living really are all about.

It seems to me that selfishness is the sin of the human race. If we broke every one of the Ten Commandments, we would be the epitome of the selfish individual. Yet consider what opportunities we have as physicians to be unselfish!

Many of us contribute time and effort to worthwhile causes. We see people who are in trouble emotionally as well as physically. We can provide the right kind of care and comfort.

What a miserable person is he who thinks only of himself! When I'm able to do a kind thing or contribute something without concern for reward, I feel that the Almighty recharges my batteries to give me warmth and contentment.

So, best wishes for the upcoming Holidays—and set a pattern of doing something for someone today, unselfishly and with good spirit.

I guarantee you will be rewarded.

John J. Mahood

John J. Mahood, M. D., *President*

THE WEST VIRGINIA MEDICAL JOURNAL

Official Organ of the West Virginia State Medical Association

The Publication Committee is not responsible for the authenticity of opinion or statements made by authors or in communications submitted to this Journal for publication. The author or communicant shall be held entirely responsible.

Published monthly on the first day of the month, at Charleston by the West Virginia State Medical Association. Original articles are accepted on condition that they are contributed exclusively to the Journal. Advertising rates furnished on request.

Address all communications to Business Manager, West Virginia Medical Journal, Box 1031, Charleston, West Virginia 25324. Phone 346-0551.

EDITORIALS

MID-WINTER PROGRAM 'BIGGER AND BETTER'

The 10th Annual Mid-Winter Clinical Conference to be held in Charleston January 28-30 shapes up as "more of the same"—and at first glance, that might not mean much.

But for this major educational event for physicians, "more of the same" means "bigger and better"—and that's definitely good.

For the past few months, stories about the developing Conference program have been appearing in the *Journal's* General News Section. Now the planning is all but complete, with just final details to be put into place.

Again, the Conference will be geared to the *practicing physician*, with an accompanying program—this time, on Sports Medicine—fashioned for the general public.

There now are few households in which intramural or interscholastic sports participation; little league baseball; midget league football; summertime tennis, golf and swimming competition, and many other kinds of athletic activity do not command significant attention.

The whole picture has been broadened even further with the rapid growth of competitive sports for girls and young women, particularly at the junior high school, high school and collegiate levels.

All of this means a greater need for public as well as physician understanding and involvement in approaching health and injury problems that are, and will be, inevitable. The physician has a major role in helping the public understand how to meet such problems. The Mid-Winter Conference program segment on Friday night, January 28, is designed to do just that, and initial reaction from school personnel, in particular, has been enthusiastic.

But the overall Conference program will offer many other presentations and discussions of major potential value to the practicing doctor in general, and the primary care physician, in particular.

We respectfully urge you to pay special attention to a preliminary but detailed program, complete with registration form, which has been mailed to your offices. It's easy to see why what just a few years ago was a Sunday afternoon chest conference has grown into perhaps the major single continuing medical education opportunity for West Virginia physicians each year.

Then we would urge you to make your plans, and your reservations, for the 1977 Conference. We're sure you won't be disappointed, if you have not previously attended—and we're equally certain that you'll again find it most beneficial if you are among previous participants.

REVIEW A BOOK

In the news section of this issue of *The Journal* is another new feature which will appear at generally regular intervals during each publication year. It is entitled "Review A Book," and lists books received at the Medical Association's Headquarters Offices from various publishers.

Readers interested in reviewing particular volumes, and then retaining them for their personal libraries, are encouraged to contact the *Journal's* Editor. The books will be shipped promptly to them.

Book reviews, of course, are not, in themselves, new as far as *The Journal* is concerned. Hopefully, however, through this new approach, we not only can stimulate more such efforts—but also make available increased numbers of new writings on topics of medical interest to more readers.

Consumerism. The proverbial camel whose nose you permit under the edge of the tent. He soon occupies the tent. The nose is already in evidence. And here comes the rest of him!

We're jealous of our professionalism. Who would deny that? We have reason to be protective of our prerogatives. No one can be as aware as we, who suffer the anguish when judgment goes faulty, of the hazards of dilettantish meddling in matters which affect the outcome of care.

CONSUMERISM

We have reason to be alarmed at the intrusiveness of lay people into matters pertaining to medical judgment and qualifications. Hospital boards made up predominantly of lay people now routinely intrude themselves in hospital staff affairs. Health planning agencies under new Federal laws are predominantly lay oriented. In peer review processes we hear agitation for consumer representation on review panels. Assorted droves of professional and semi-professional non-medical healers agitate for independent-practitioner status and coverage under hospital and medical care insurance. The height of absurdity recently has been reached in Pennsylvania where, under a new mental health law, committed patients in mental hospitals now have the right to review, amend or approve treatment plans proposed for them before they can be put into effect.

Perhaps we're too sensitive—sensitized by the universal naivete or simple-mindedness manifested by lay people in respect to their own health. How could we, in good conscience and in full possession of our wits, voluntarily encourage or permit such as these to influence decisions made in regard to the medical care or well being of others?

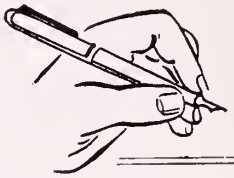
The general purpose of consumer representation has never been made clear. On the face of it, it is to represent consumer interests. It is thus assumed that non-consumer board members are subject to corruption to the point that watchdogs (consumers) are needed to keep them honest. It is unclear how consumer representatives avoid the taint of corruptibility.

Nevertheless, we're stuck with consumerism. Involuntarily! It's now part of the boiler plate of any law pertaining to the dispensing of public funds to have consumer representatives on whatever advisory boards are set up to assist administration of the program.

It is of some comfort, but not nearly enough to restore a sense of sanity about the subject, to realize that the medical profession is not alone in its consumer affliction. Looking at the changes already effected and those being agitated for in the church, we must assume that even God suffers the affliction.

It doesn't really make sense. It never will. But consumerism is politically popular and apparently makes political sense. There aren't that many consumer appointments available to generate a block of votes of any consequence, but no politician can afford to be accused, justly or unjustly, of not having the best interest of consumers (voters) close to his heart.

We're not required to like dealing with consumers in all the intrusive places we find them, and it's a little much to ask us to educate them. We must deal with them, though, if only to isolate the folly which might contaminate medical care were they to be unchallenged.



Our Readers Speak

RESEARCH DATA NEEDED

I am currently engaged in research on the Munchausen (Hospital Addiction) Syndrome and its variants. I would like to correspond with any other physicians who have had personal contact with such patients. To this end I would appreciate it if you could print this letter in your Correspondence (or Letters) section. All responses to be addressed to:

S. E. Hyler, M. D.
5620 Netherland Avenue
Riverdale, New York 10471

Sugarplums 1976

Season's Greetings. Christmas Cheer!
Why are faces insincere?
Stores are filled as shoppers spend.
Why next week will they contend?
Mantels lined with Christmas cards.
Why the need to hire the guards?

Tinsel, lights, white mistletoe.
Why are sounds fortissimo?
Distant carols soothe the ear.
Why does litter bring a tear?
Questions thus my nights record.
Answers only you know, Lord.

Stephen D. Ward, M. D.

GENERAL NEWS

Tenth Mid-Winter Conference Program Nears Completion

Plans for the Tenth Mid-Winter Clinical Conference to be held in Charleston January 28-30 were nearing completion in November as the final three scientific speakers were announced by the Program Committee.

Walter J. O'Donohue, Jr., M.D.

The continuing education program will be held at the Daniel Boone Hotel, beginning at 2 P. M. on Friday, January 28, and continuing through noon on Sunday, January 30. The conference is sponsored by the State Medical Association in conjunction with other medical groups and voluntary health agencies.

Scientific sessions will be held Friday afternoon, Saturday morning and afternoon, and Sunday morning. The newly-announced speakers, who will participate in a symposium on "Acute Thoracic Problems" constituting the Saturday afternoon session, and their topics, will be:

"Adult Respiratory Distress"—Walter J. O'Donohue, Jr., M. D., Richmond, Virginia, Associate Professor of Medicine, Medical College of Virginia;

"The Prevention, Diagnosis and Treatment of Thrombophlebitis"—R. Thomas Linger, M. D., Charleston surgeon; and

"The Prevention, Diagnosis and Treatment of Pulmonary Embolism"—Dominic J. Gaziano, M. D., Charleston internist and Clinical Associate Professor of Medicine, Charleston Division, West Virginia University Medical Center.

It also was announced that:

—James T. Suter, Executive Director of the West Virginia Health Systems Agency, Inc., will speak during the Sunday morning session. His topic will be "The Health Systems Agency—What It's All About." He will replace Dr. Irvin M. Sopher of Charleston, Chief Medical Examiner for the State of West Virginia, as previously announced. Doctor Sopher will be unable to attend the conference.

—The Friday evening physicians' session will be entitled "West Virginia Medical Institute, Inc.—Year I," a presentation and panel discussion of problem cases. Dr. Harry S. Weeks, Jr., of Wheeling, Institute President, will preside.

Walter J. O'Donohue, Jr., M. D.

Doctor O'Donohue, a native of Washington, D. C., was graduated from Virginia Military Institute and received his M. D. degree in 1961 from the Medical College of Virginia. He received his postgraduate training at that institution and was appointed to the faculty as Assistant Instructor in Medicine in 1966. He presently is Director of the Respiratory Therapy Department and the Respiratory Intensive Care Unit, Co-Director of the Pulmonary Function Laboratories, and Clinical Coordinator for Respiratory Disease.

Doctor O'Donohue was certified by the American Board of Internal Medicine in 1968 and became a Diplomate in Pulmonary Disease in 1972. He is a Fellow of the American College of Chest Physicians and the American College of Physicians, and is a member of the American Thoracic Society and the American Association for Respiratory Therapy. Immediate Past President of the Virginia Thoracic Society, he holds a variety of posts with other state, regional and national respiratory and related groups.

Doctor O'Donohue is the major author of a number of scientific articles, including "Management in a Respiratory Intensive Care Unit," appearing in the February, 1976, issue of the *Journal of the American Medical Association;* and has made some 40 major presentations at scientific meetings.

Other Conference Speakers

Here are the other speakers and their topics, as announced previously, who will appear on the conference program.

Friday Afternoon:

The opening Symposium on Sports Medicine beginning at 2 P. M.: "The Physical Exam—Basis for Exclusion from Athletics"—Herbert E. Warden, M. D., Morgantown; "The Trainer's Role (Trainer-Teacher Concept at the High School Level)"—John C. Spiker, M. Ed., Morgantown; "Responsibilities of the Team Physician on the Playing Field and Initial Evaluation of the Injured Player"—K. Douglas Bowers, Jr., M. D., Morgantown;

(Specific athletic injuries) "Acute Respiratory Problems and Thoracic Injuries"—Woctor Warden; "Abdominal"—James P. Boland, M. D., Charleston; "Head"—Arthur L. Poffenbarger, M. D., Charleston;

"Facial"—Jacques Charbonniez, M. D., Charleston; "Soft Tissue"—David A. Santrock, M. D., Charleston; "Spine"—Tony C. Majestro, M. D., Charleston;

"Shoulder"—Robert L. Ghiz, M. D., Charleston; "Hand"—Richard H. Sibley, M. D., Charleston; "Knee"—Doctor Bowers; "Ankle"—Robert W. Lowe, M. D., Huntington; and "Major Fractures and Epiphyseal Injuries"—Carl J. Roncaglione, M. D., Charleston.

Friday Evening:

Sports Medicine (Public Session) beginning at 8 o'clock: "Why Should Your Child Be Examined for Competitive Athletics?"—Doctor Warden; "When and Why Should Sports Injuries Be Referred to a Physician?"—Doctor Bowers; "Midget League Football Injuries"—Doctor Lowe; and "Prevention of Sports Injuries"—Mr. Spiker and Doctor Majestro.

(Physicians' Session beginning at 8 o'clock was reported above.)

Saturday Morning:

Beginning at 9:30, Symposium on "The Medical and Surgical Management of Upper Gastrointestional Bleeding:" "Surgical Management"—George J. Hill II, M. D., Huntington; "Endoscopic Diagnosis"—Thomas E. Chvasta, M. D., Wheeling; and "Radiographic Diagnosis"—Johnsey L. Leef, Jr., M. D., Charleston.

Saturday Afternoon:

(Session beginning at 2 o'clock reported above.)

Saturday Evening:

Cash bar (beginning at 7 o'clock) and dinner. Speaker—Robert W. Coon, M. D., Huntington, Dean of the Medical School and Vice President for Health Services, Marshall University.

Kenneth G. MacDonald, M. D., Charleston, Treasurer, West Virginia State Medical Association, will preside.

Sunday Morning:

Beginning at 9:30 (in addition to James T. Suter, reported above): "How People Get Well Through Psychiatry"—James R. Hodge, M. D., Akron, Ohio; and "Some Practical Aspects of Computed Tomography"—John A. Goree, M. D., Durham, North Carolina.

Other Conference Information

Serving on the Program Committee are Drs. Ralph H. Nestmann and Joseph T. Skaggs of Charleston, Co-Chairmen; and William O. McMillan, Jr., of Charleston, and C. Carl Tully of South Charleston.

The conference is approved for 12 hours of credit in Category 1 of the Physician's Recognition Award of the American Medical Association—and for 12 hours of prescribed credit by the American Academy of Family Physicians.

A registration fee of $20 for the entire conference, including the Saturday dinner, will be charged to all registrants except nurses, medical students, interns and residents.

All extra dinner tickets (not included in the registration fee) for the dinner session on Saturday, January 29, must be purchased by 10 A. M. on that day. Such tickets ($7.50 each) would include those for spouses and other guests—and for nurses, medical students, interns and residents.

These tickets will be available at the registration desk beginning with registration Friday afternoon.

All other registrants paying the $20 fee will receive their dinner tickets when they register at the conference.

The final arrangements for the program, including the physicians who will preside at the scientific sessions and organizations holding meetings in conjuction with the conference, will appear in the January issue of *The Journal*.

Some of the guests who attended the meeting of the Central West Virginia Medical Society on October 28 in Buckhannon are shown with Dr. Charles T. Lively (right) of Weston, President of the Society, and Mrs. Lively. From left, are Dr. John J. Mahood of Bluefield, President of the West Virginia State Medical Association; Mrs. Mahood; and Mrs. J. L. Mangus of Charleston, President of the Woman's Auxiliary to the State Medical Association. Doctor Mahood addressed the Society during its dinner meeting. Other guests included Charles R. Lewis of Charleston, Executive Secretary of the State Medical Association; and Custer B. Holliday, Executive Assistant.

Continuing Education Activities

Here are the continuing medical education activities listed primarily by the West Virginia University School of Medicine for part of 1976 and 1977, as compiled by Dr. N. LeRoy Lapp, Assistant Dean for Continuing Education. The schedule is presented as a convenience for physicians in planning their continuing education program. (Other national, state and district medical meetings are listed in the *Medical Meetings* Department of *The Journal.*)

The program is tentative and subject to change. It should be noted that weekly conferences also are held on the Charleston and Wheeling campuses as well as in Morgantown. Further information about these may be obtained from: Division of Continuing Education, WVU Medical Center, P. O. Box 2867, Charleston 25330; Office of Continuing Medical Education, WVU Medical Center, Morgantown 26506; or, Office of Continuing Medical Education, Wheeling Division, WVU School of Medicine, Ohio Valley Medical Center, 2000 Eoff Street, Wheeling 26003.

Dec. 1	Pediatric Day—Current Problems in Adolescence	Morgantown
Dec. 1-3	Percutaneous Techniques Cosponsored by the Joint Socio-Economics CME Subcommittee and the Congress of Neurological Surgeons	Morgantown
Dec. 4	Nuclear Medicine	Charleston
	1977	
Jan. 27	Stonewall Jackson Memorial Hospital Visiting Physician Program	Weston
Feb. 24	Stonewall Jackson Memorial Hospital Visiting Physician Program	Weston
Mar. 2-4	Selected Topics in Internal Medicine Cosponsored by American College of Physicians	Morgantown
Mar. 24	Stonewall Jackson Memorial Hospital Visiting Physician Program	Weston
Mar. 25	Fourth Annual Newborn Day	Charleston
Mar. 25, 26	Cancer Teaching Day—Human Cervical Cancer	Morgantown

State Medical Assn. Announces February Caribbean Tour

The State Medical Association is announcing a new vacation tour, "Trans Panama Canal Air/Sea Cruise," consisting of a Caribbean itinerary that includes South America and transit through the Panama Canal.

The 10-day tour, planned by INTRAV, will depart from Cincinnati on February 1 and return on February 10.

The tour is being offered to members of the State Medical Association and their families. The cost, which includes chartered, round-trip air flights and meals and accommodations aboard the Sun Line's Stella Oceanis, is as low as $998.

In addition to the Panama Canal and Balboa, ports of call and other points of interest will include Bridgetown, Barbados; the island of Grenada, La Guaira and Caracas in Venezuela, the island of Aruba; Cartagena, Colombia; and the San Blas Islands. Optional shore excursions are available in each port.

A program of medical seminars will be held during the tour for approximately eight hours of credit in Category 2 of the AMA's Physician's Recognition Award.

For additional information contact West Virginia State Medical Association, P. O. Box 1031, Charleston 25324.

Physician Honored During Regional ACP Meeting

A tribute to Jack D. Myers, M. D., Pittsburgh, was among the highlights of the combined Western Pennsylvania and West Virginia Regional Meeting of the American College of Physicians (ACP) in Pittsburgh, November 12-13. Doctor Myers is Professor of Medicine and former Chairman of the Department of Medicine at the University of Pittsburgh and current ACP President.

Participants in the tribute to Doctor Myers included Eugene Stead, Jr., M. D., Durham, North Carolina, Professor of Medicine at Duke University; and James J. Leonard, M. D., Pittsburgh, Chairman of the Department of Medicine at the University of Pittsburgh.

Among the guests present were Edward C. Rosenow, Jr., M. D., Philadelphia, Executive Vice President of the ACP. Doctor Rosenow, as official ACP representative, reported on the policies and activities of the College.

The scientific program included 17 research papers on a wide variety of topics in internal medicine, two panel discussions and a workshop on the use of computers in medical diagnosis.

Two Huntington Physicians Elected to Legislature

Two physicians, both from Huntington, will be members of West Virginia's House of Delegates when the 63rd Legislature convenes in January.

Dr. Albert C. Esposito, an ophthalmologist and a Republican, won re-election to his second two-year House term in the November 2 balloting.

Elected to his first term in the House was Dr. P. Dorsey Ketchum, a retired eye, ear, nose and throat specialist. Doctor Ketchum is a Democrat.

Doctor Esposito's major committee assignments during the 62nd Legislature were in the areas of education, and health and welfare.

11 West Virginia Physicians Become ACS Fellows

Eleven West Virginia physicians became Fellows of the American College of Surgeons in formal ceremonies held recently in Chicago. They are:

Drs. Prudencio C. Corro, Beckley; M. Stewart Funderburk, Jr., Berkeley Springs; Bhasker R. Pujari, Bluefield; James L. Bryant II, Clarksburg; Joseph A. Noronha, Elkins; Nityananda Santra, Elkins; Charles E. Haislip, Fairmont; Sirous Arya, Huntington; James W. Woodford, Philippi; Roger Isla, Weirton; and Reza Parivash Asli, Wheeling.

Nominations of Physicians Confirmed by Senate

The following were among nominations by Gov. Arch A. Moore, Jr., which the State Senate confirmed prior to adjournment of a special legislative session in early November:

Hu C. Myers, M. D., of Philippi, for a new term on the West Virginia Board of Health to end June 30, 1985.

Jack J. Stark, M. D., of Vienna, Wood County, for a new term on the Medical Licensing Board of West Virginia to serve until June 30, 1981.

A. Thomas McCoy, M.D., Charleston, to an unexpired term, to end June 30, 1978, on the Medical Licensing Board.

Doctor Weiss Cancer President

Dr. Raymond B. Weiss of Morgantown was elected President of the American Cancer Society, West Virginia Division, at a meeting of the Division's Board of Directors held recently in Huntington. Dr. Tara C. Sharma of Huntington was elected Vice President.

Medical Meetings

Dec. 1-4—National Perinatal Assn., St. Louis.

Dec. 4-8—AMA Clinical, Philadelphia.

Dec. 5-9—Am. Academy of Dermatology, Chicago.

Dec. 6-8—Southern Surgical Assn., Palm Beach, Fla.

1977

Jan. 17-21—Southeastern Breast Oncology Conference, Miami.

Jan. 20-22—Neurosurgical Society of the Virginias, Hot Springs, Va.

Jan. 28-30—Tenth Mid-Winter Clinical Conference, Charleston.

Jan. 28-30—AMA Congress on Medical Education, Chicago.

Feb. 3-8—Am. Academy of Orthopaedic Surgeons, Las Vegas.

Feb. 6-9—Am. Society of Abdominal Surgeons, New Orleans.

Feb. 9-13—Am. College of Nuclear Physicians, New Orleans.

Feb. 28-March 3—Am. College of Cardiology, Philadelphia.

March 24-27—ASIM, Kansas, Mo.

March 26-31—Am. Academy of Allergy, New York City.

March 28-31—ACS, Los Angeles.

April 3-9—Am. Assn. of Immunologists, Chicago.

April 13-16—Am. Gynecological Society, Litchfield Park, Ariz.

April 17-21—Am. Academy of Pediatrics, New Orleans.

April 18-21—ACP, Dallas.

April 20-22—Medical & Chirurgical Faculty of Md., Cockeysville, Md.

April 22-24—W. Va. Chapter, AAFP Morgantown.

April 24-27—W. Va. Academy of Ophthal. & Otolaryn., White Sulphur Springs.

April 25-30—Am. Academy of Neurology, Atlanta.

May 4-7—W. Va. Chapter, ACS, White Sulphur Springs.

May 15-18—Am. Thoracic Society, San Francisco.

May 15-19—Ohio State Medical Assn., Columbus.

June 5-7—Am. Diabetes Assn., St. Louis.

June 18-23—AMA, San Francisco.

Aug. 24-27—110th Annual Meeting, W. Va. State Medical Assn., White Sulphur Springs.

Oct. 10-13—AAFP, Las Vegas.

Nov. 6-9—Southern Medical Assn., Dallas.

Christmas Seals Fight Lung Disease

AMERICAN LUNG ASSOCIATION

The "Christmas Seal" People

West Virginia Lung Association

Space contributed by the publisher as a public service

INDEX TO VOLUME LXXII

THE WEST VIRGINIA MEDICAL JOURNAL—1976

A

Abscess, Spinal Epidural, Acute—Charles R. Loar, M.D.; and Thomas R. Connelly, M.D. Mar. 56

Acosta, Arturo, M.D.; Carlos Rubio, M.D.; Rafael Antonio Ortiz, M.D.; P. H. Garcia Pont, M.D.; Pedtro Lorenzi, M.D.; Donald Vazquez, M.D.; and Jorge Melendez, M.D.—Liver Biopsy With the Vim Tru Cut Needle Dec. 345

Acute Spinal Epidural Abscess—Chares R. Loar, M.D.; and Thomas R. Connelly, M.D. Mar. 56

Al-Hajj, Gabriel E., M.D.; E. Schrae La Plante, M.D.; and Bernard Zimmermann, M.D.—Colotomy and Polypectomy (A Review) Feb. 28

Almond, Greenbrier, M.D.—Interpretation of Non-Interpretive Psychiatric Intervention in the General Hospital Setting: An Overview of the Psychiatric Consultation Nov. 317

Aneurysm, Intracranial, Surgery, Recent Advances in—John L. Fox, M.D.; and G. Robert Nugent, M.D. May 104

Aneurysms, Syphilitic, with Bone Erosion and Rupture—Roland J. Weisser, Jr., M.D.; and Robert J. Marshall, M.D. Jan. 1

Antimicrobial Usage in Patients with Renal Impairment: Antimicrobial Therapy Series—Jack L. Le Frock, M.D.; et al June 130

Antimicrobial Therapy Series—Jack L. Le Frock, M.D.; Arthur I. Jacknowitz, Pharm. D.; Randall A. Prince, Pharm. D.; and Perry M. Kalis, M.D.:
- Use and Abuse of Antimicrobial Agents (A Critique) June 127
- Antimicrobial Usage in Patients with Renal Impairment June 130
- Treatment of Common Infectious Disorders June 135
- Complication of Antimicrobial Therapy (An Overview) June 146

Aorta, Abdominal, Ultrasonic Evaluation of the—Michael T. Hogan, M.D. Feb. 36

Aorta-Coronary Bypass Surgery—Dilip K. Basu, M.D.; James H. Walker, M.D.; and Mitsuru Nakatsuka, M.D. Apr. 75

Aplastic Anemia: A Serious Complication of Viral Hepatitis (Medical Grand Rounds from the West Virginia University Medical Center)—Edited by Raymond B. Weiss, M.D. Mar. 61

Appendiceal Cystadenoma and the Acute Abdomen (A Case Report)—Leonard Prutsok, M.D.; Mansour Djadalizadeh, M.D.; Erlinda L. de la Pena, M.D.; and Donald E. McDowell, M.D. May 101

Asbestosis in West Virginia and Eastern Ohio—John A. Bellotte, M. D.; and Dominic Gaziano, M.D. Dec. 341

Athletic Injuries, High School, Disposition of—K. Douglas Bowers, Jr., M.D. Apr. 88

B

Basu, Dilip K., M.D.; James H. Walker, M.D.; and Mitsuru Nakatsuka, M.D.—Aorta-Coronary Bypass Surgery Apr. 75

Belis, John A., M.D.; and D. Franklin Milam, M.D.—Treatment of Hemorrhagic Radiation Cystitis with Formalin Feb. 31

Bellotte, John A., M.D.; and Dominic Gaziano, M.D.—Asbestosis in West Virginia and Eastern Ohio Dec. 341

Bladder Dysfunction, Non-Obstructive—Mark F. Roller, M.D.; Stanley J. Kandzari, M.D.; and D. Franklin Milam, M.D. Jan. 5

Biopsy, Liver, with the Vim Tru Cut Needle—Rafael Antonio Ortiz, M.D.; P. H. Garcia Pont, M.D.; Pedtro Lorenzi, M.D.; Donald Vazquez, M.D.; Jorge Melendez, M.D.; Arturo Acosta, M.D.; and Carlos Rubio, M.D. Dec. 345

Bowers, K. Douglas, Jr., M.D.—Disposition of High School Athletic Injuries Apr. 88

Bronchogenic Carcinoma, Mixed Primary, Presenting As a Solitary Pulmonary Nodule—Edwin C. James, M.D.; and William A. Meriwether M.D. Sept. 251

C

Carcinoid Tumors and Carcinoid Syndrome (Medical Grand Rounds from the West Virginia University Medical Center)—Edited by Raymond B. Weiss, M.D. Nov. 321

Carcinoma, Lung, Undifferentiated, Small Cell (Oat Cell) (Medical Grand Rounds from the West Virginia University Medical Center)—Edited by Raymond B. Weiss, M.D. Sept. 254

Carcinoma, Mixed Primary Bronchogenic, Presenting As a Solitary Pulmonary Nodule—Edwin C. James, M.D.; and William A. Meriwether, M.D. Sept. 251

Carter, Donald C., M.D.—Psychiatric Diagnosis and Referral: A Critical Reappraisal Oct. 285

Cataract Surgery, Lens Implant in—Further Experience—M. C. Korstanje, M.D. July 175

Clinical Experience with Intrauterine Devices as a Means of Contraception in Kanawha County, West Virginia—Saeed Mahmoodian, M.D. July 170

Cody, Robert C., M.A.—Tympanometry and the Physician June 165

Colotomy and Polypectomy (A Review)—Gabriel E. Al-Hajj, M.D.; E. Schrae La Plante, M.D.; and Bernard Zimmermann, M.D. Feb. 28

Complication of Antimicrobial Therapy (An Overview): Antimicrobial Therapy Series—Jack L. Le Frock, M.D.; et al June 146

Congenital Sarcoma of the Hand (A Case Report)—John P. Evans, M.D.; and Lawrance S. Miller, M.D. Mar. 58

Connelly, Thomas R., M.D.; and Charles R. Loar, M.D.—Acute Spinal Epidural Abscess Mar. 56

Contraception, Clinical Experience with Intrauterine Devices as a Means of, in Kanawha County, West Virginia—Saeed Mahmoodian M.D. July 170

Convocation, 1976 Student Research, West Virginia University School of Medicine Aug. 208

Current Concept of the Pathophysiology of the Hyperglycemia of Diabetes Mellitus—Thomas G. Skillman, M.D. Sept. 247

Cystadenoma, Appendiceal, and the Acute Abdomen (A Case Report)—Leonard Prutsok, M.D.; Mansour Djadaliazadeh, M. D.; Erlinda L. de la Pena, M.D.; and Donald E. McDowell, M.D. May 101

Cystitis, Hemorrhagic Radiation, Treatment of, with Formalin—John A. Belis, M.D.; and D. Franklin Milam, M.D. Feb. 31

D

de la Pena, Erlinda L., M.D.; Donald E. McDowell, M.D.; Leonard Prutsok, M.D.; and Mansour Djadalizadeh, M.D.—Appendiceal Cystadenoma and the Acute Abdomen (A Case Report) May 101

Diabetes Mellitus, A Current Concept of the Pathophysiology of the Hyperglycemia of—Thomas G. Skillman, M.D. Sept. 247

Diabetic Women, Pregnancy in: Review of Five Years' Experience at the Sacramento Medical Center—Narinder N. Sehgal, M.D. Apr. 81

Diagnosis and Treatment of Benign Lesions in the Upper Urinary Collecting System—Tara C. Sharma, M.D. Nov. 311

Disposition of High School Athletic Injuries—K. Douglas Bowers, Jr., M.D. Apr. 88

Djadalizadeh, Mansour, M.D.; Erlinda L. de la Pena, M.D.; Donald E. McDowell, M.D.; and Leonard Prutsok, M.D.—Appendiceal Cystadenoma and the Acute Abdomen (A Case Report) May 101

Dossett, John H., M.D.; John S. Rogers II, M.D.; Elaine Eyster; and Robert W. Hamilton, M.D.—Unusual Manifestations of Acute Lymphocytic Leukemia Oct. 281

E

Evans, John P., M.D.; and Lawrance S. Miller, M.D.—Congenital Sarcoma of the Hand (A Case Report) Mar. 58

F

Flink, Edmund B., M.D.—Scholarship in Medicine Aug. 205

Formalin, Treatment of Hemorrhagic Radiation Cystitis with—John A. Belis, M.D.; and D. Franklin Milam, M.D. Feb. 31

Fox, John L., M.D.; and G. Robert Nugent, M.D.—Recent Advances in Intracranial Aneurysm Surgery May 104

G

Gallbladder Anomalies with a Report of a Double Gallbladder—Gopal M. Pardasani, M.D. ..... Jan. 5

Gaziano, Dominic, M.D.; and John A. Bellotte, M.D.—Asbestosis in West Virginia and Eastern Ohio ..... Dec. 341

Giustini, Fernando G., M.D.—Pelvic Pneumogynecography ..... Aug. 197

H

Hamilton, Robert W., M.D.; John H. Dossett, M.D.; John S. Rogers II, M.D.; and Elaine Eyster—Unusual Manifestations of Acute Lymphocytic Leukemia ..... Oct. 281

Hand, Congenital Sarcoma of the (A Case Report)—John P. Evans, M.D.; and Lawrance S. Miller, M.D. ..... Mar. 58

Health of General Robert E. Lee, The—Edward J. Van Liere, M.D., Ph.D. ..... May 113

Hogan, Michael T., M.D.—Ultrasonic Evaluation of the Abdominal Aorta ..... Feb. 36

Hyperglycemia of Diabetes Mellitus, A Current Concept of the Pathophysiology of the— Thomas G. Skillman, M.D. ..... Sept. 281

I

Identification, Stabilization and Transport of the High-Risk Neonate—Martha D. Mullett, M.D.; and William A. Neal, M.D. ..... Oct. 278

Insulin Hypersensitivity with Insulin Resistance—R. Gregory McMorrow, M.D.; and Lewis H. McConnell, M.D. ..... Feb. 25

Interpretation of Non-Interpretive Psychiatric Intervention in the General Hospital Setting: An Overview of the Psychiatric Consultation—Greenbrier Almond, M.D. ..... Nov. 317

Intracranial Aneurysm Surgery, Recent Advances in—John L. Fox, M.D.; and G. Robert Nugent, M.D. ..... May 104

Intrauterine Devices, Clinical Experience with, as a Means of Contraception in Kanawha County, West Virginia—Saeed Mahmoodian, M.D. ..... July 170

J

Jacknowitz, Arthur I., Pharm. D.; Randall A. Prince, Pharm. D.; Perry M. Kalis, M.D.; and Jack L. Le Frock, M.D.—Antimicrobial Therapy Series:
- Use and Abuse of Antimicrobial Agents (A Critique) ..... June 127
- Antimicrobial Usage in Patients with Renal Impairment ..... June 130
- Treatment of Common Infectious Disorders ..... June 135
- Complication of Antimicrobial Therapy (An Overview) ..... June 146

James, Edwin C., M.D.; and William A. Meriwether, M.D.—Mixed Primary Bronchogenic Carcinoma Presenting as a Solitary Pulmonary Nodule ..... Sept. 251

K

Kalis, Perry M., M.D.; Jack L. Le Frock, M.D.; Arthur I. Jacknowitz, Pharm. D.; and Randall A. Prince, Pharm. D.—Antimicrobial Therapy Series:
- Use and Abuse of Antimicrobial Agents (A Critique) ..... June 127
- Antimicrobial Usage in Patients with Renal Impairment ..... June 130
- Treatment of Common Infectious Disorders ..... June 135
- Complication of Antimicrobial Therapy (An Overview) ..... June 146

Kandzari, Stanley J., M.D.; D. Franklin Milam, M.D.; and Mark F. Roller, M.D.—Non-Obstructive Bladder Dysfunction ..... Jan. 8

Korstanje, M. C., M.D.—Lens Implant in Cataract Surgery—Further Experience ..... July 175

L

La Plante, E. Schrae, M.D.; Bernard Zimmermann, M.D.; and Gabriel E. Al-Hajj, M.D.—Colotomy and Polypectomy (A Review) ..... Feb. 28

Leckie, Jack, M.D.—Presidential Address ..... Oct. 275

Lee, General Robert E., The Health of—Edward J. Van Liere, M.D., Ph.D. ..... May 113

Le Frock, Jack L., M.D.; Arthur I. Jacknowitz, Pharm. D., Randall A. Prince, Pharm. D.; and Perry M. Kalis, M.D.—Antimicrobial Therapy Series:
- Use and Abuse of Antimicrobial Agents (A Critique) ..... June 127
- Antimicrobial Usage in Patients with Renal Impairment ..... June 130
- Treatment of Common Infectious Disorders ..... June 135
- Complication of Antimicrobial Therapy (An Overview) ..... June 146

Lens Implant in Cataract Surgery—Further Experience—M. C. Korstanje, M.D. ..... July 175

Lesions, Benign, Diagnosis and Treatment of, in the Upper Urinary Collecting System—Tara C. Sharma, M.D. ..... Nov. 311

Leukemia, Acute Lymphocytic, Unusual Manifestations of—John S. Rogers II, M.D.; Elaine Eyster; Robert W. Hamilton, M.D.; and John H. Dossett, M.D. ..... Oct. 281

Liver Biopsy with the Vim Tru Cut Needle—Rafael Antonio Ortiz, M.D.; P. H. Garcia Pont, M.D.; Pedtro Lorenzi, M.D.; Donald Vazquez, M.D.; Jorge Melendez, M.D.; Arturo Acosta, M.D.; and Carlos Rubio, M.D. ..... Dec. 345

Loar, Charles R., M.D.; and Thomas R. Connelly, M.D.—Acute Spinal Epidural Abscess ..... Mar. 56

Lorenzi, Pedtro, M.D.; Lonald Vazquez, M.D.; Jorge Melendez, M.D.; Arturo Acosta, M.D.; Carlos Rubio, M.D.; Rafael Antonio Ortiz, M.D.; and P. H. Garcia Pont, M.D.—Liver Biopsy with the Vim Tru Cut Needle ..... Dec. 345

M

Mahmoodian, Saeed, M.D.—Clinical Experience with Intrauterine Devices as a Means of Contraception in Kanawha County, West Virginia ..... July 170

Marshall, Robert J., M.D.; and Roland J. Weisser, Jr., M.D.—Syphilitic Aneurysms with Bone Erosion and Rupture ..... Jan. 1

McConnell, Lewis H., M.D.; and R. Gregory McMorrow, M.D.—Insulin Hypersensitivity with Insulin Resistance ..... Feb. 25

McDowell, Donald E., M.D.; Leonard Prutsok, M.D.; Mansour Djadalizadeh, M.D.; Erlinda L. de la Pena, M.D.—Appendiceal Cystadenoma and the Acute Abdomen (A Case Report) ..... May 101

McMorrow, R. Gregory, M.D.; and Lewis H. McConnell, M.D.—Insulin Hypersensitivity with Insulin Resistance ..... Feb. 25

Medical Examiner System, The: A New Concept in Community Medicine for the State of West Virginia—Irvin M. Sopher, M.D. ..... Mar. 49

Medical Grand Rounds from the West Virginia University Medical Center—Edited by Raymond B. Weiss, M.D.:
- Mycosis Fungoides ..... Jan. 11
- Aplastic Anemia: A Serious Complication of Viral Hepatitis ..... Mar. 61
- Medical Management of Rheumatoid Arthritis ..... May 107
- Pheochromocytoma ..... July 178
- Small Cell (Oat Cell) Undifferentiated Lung Carcinoma ..... Sept. 254
- Carcinoid Tumors and Carcinoid Syndrome ..... Nov. 321

Medical Management of Rheumatoid Arthritis (Medical Grand Rounds from the West Virginia University Medical Center)—Edited by Raymond B. Weiss, M.D. ..... May 107

Medicine, Scholarship in—Edmund B. Flink, M.D. ..... Aug. 205

Melendez, Jorge, M.D.; Arturo Acosta, M.D.; Carlos Rubio, M.D.; Rafael Antonio Ortiz, M.D.; P. H. Garcia Pont, M.D.; Pedtro Lorenzi, M.D.; and Donald Vazquez, M.D.—Liver Biopsy with the Vim Tru Cut Needle ..... Dec. 345

Meriwether, William A., M.D.; and Edwin C. James, M.D.—Mixed Primary Bronchogenic Carcinoma Presenting as a Solitary Pulmonary Nodule ..... Sept. 257

Milam, D. Franklin, M.D.; and John A. Belis, M.D.—Treatment of Hemorrhagic Radiation Cystitis with Formalin ..... Feb. 31

Milam, D. Franklin, M.D.; Mark F. Roller, M.D.; and Stanley J. Kandzari, M.D.—Non-Obstructive Bladder Dysfunction ..... Jan. 8

Miller, Lawrance S., M.D.; and John P. Evans, M.D.—Congenital Sarcoma of the Hand (A Case Report) ..... Mar. 58

Mixed Primary Bronchogenic Carcinoma Presenting as a Solitary Pulmonary Nodule—Edwin C. James, M.D.; and William A. Meriwether, M.D. ..... Sept. 251

Mullett, Martha D.; and William A. Neal, M.D.—Identification, Stabilization and Transport of the High-Risk Neonate ..... Oct. 278

Mycosis Fungoides (Medical Grand Rounds from the West Virginia University Medical Center)—Edited by Raymond B. Weiss, M.D. ..... Jan. 11

N

Nakatsuka, Mitsuru, M.D.; Dilip K. Basu, M.D.; and James H. Walker, M.D.—Aorta-Coronary Bypass Surgery ..... Apr. 75

Neal, William A., M.D.; and Martha D. Mullett—Identification, Stabilization and Transport of the High-Risk Neonate ..... Oct. 278

Neonate, High-Risk, the Identification, Stabilization and Transport of—Martha D. Mullett and William A. Neal, M.D. Oct. 278

Nodule, Solitary Pulmonary, Mixed Primary Bronchogenic Carcinoma Presenting as a—Edwin C. James, M.D.; and William A. Meriwether, M.D. Sept. 251

Non-Obstructive Bladder Dysfunction—Mark F. Roller, M.D.; Stanley J. Kandzari, M.D.; and D. Franklin Milam, M.D. Jan. 8

Nugent, G. Robert, M.D.; and John L. Fox, M.D.—Recent Advances in Intracranial Aneurysm Surgery May 104

O

Ortiz, Rafael Antonio, M.D.; P. H. Garcia Pont, M.D.; Pedtro Lorenzi, M.D.; Donald Vazquez, M.D.; Jorge Melendez, M.D.; Arturo Acosta, M.D.; and Carlos Rubio, M.D.—Liver Biopsy with the Vim Tru Cut Needle Dec. 345

P

Pardasani, Gopal M., M.D.—Gallbladder Anomalies with a Report of a Double Gallbladder Jan. 5

Pardasani, Gopal M., M.D.; and Bhasker R. Pujari, M.D.—Spontaneous Recanalization of Vas Deferens Dec. 348

Pathophysiology of the Hyperglycemia of Diabetes Mellitus, A Current Concept of the—Thomas G. Skillman, M.D. Sept. 247

Pelvic Pneumogynecography—Fernando G. Giustini, M.D. Aug. 197

Pheochromocytoma (Medical Grand Rounds from West Virginia University Medical Center)—Edited by Raymond B. Weiss, M.D. July 178

Pneumogynecography, Pelvic—Fernando G. Giustini, M.D. Aug. 197

Polypectomy, and Colotomy (A Review)—Gabriel E. Al-Hajj, M.D.; E. Schrae La Plante, M.D.; and Bernard Zimmermann, M.D. Feb. :28

Pont, P. H. Garcia, M.D.; Pedtro Lorenzi, M.D.; Donald Vazquez, M.D.; Jorge Melendez, M.D.; Arturo Acosta, M.D.; Carlos Rubio, M.D.; and Rafael Antonio Ortiz, M.D.—Liver Biopsy with the Vim Tru Cut Needle Dec. 345

Pregnancy in Diabetic Women: Review of Five Years' Experience at the Sacramento Medical Center—Narinder N. Sehgal, M.D. Apr. 81

Presidential Address—Jack Leckie, M.D. Oct. 275

Prince, Randall A., Pharm. D.; Perry M. Kalis, M.D.; Jack L. Le Frock, M.D.; and Arthur I. Jacknowitz, Pharm. D.—Antimicrobial Therapy Series:
- Use and Abuse of Antimicrobial Agents (A Critique) June 127
- Antimicrobial Usage in Patients with Renal Impairment June 130
- Treatment of Common Infectious Disorders June 135
- Complication of Antimicrobial Therapy (An Overview) June 146

Prutsok, Leonard, M.D.; Mansour Djadallzadeh, M.D.; Erlinda L. de la Pena, M.D.; and Donald E. McDowell, M.D.—Appendiceal Cystadenoma and the Acute Abdomen (A Case Report) May 101

Psychiatric Diagnosis and Referral: A Critical Reappraisal—Donald C. Carter, M.D. Oct. 285

Psychiatric Intervention in the General Hospital Setting, Interpretation of Non-Interpretive: An Overview of the Psychiatric Consultation—Greenbrier Almond, M.D. Nov. 317

Pujari, Bhasker R., M.D.; and Gopal M. Pardasani, M.D.—Spontaneous Recanalization of Vas Deferens Dec. 348

R

Recanallzation, Spontaneous, of Vas Deferens—Bhasker R. Pujari, M.D.; and Gopal M. Pardasani, M.D. Dec. 348

Recent Advances in Intracranial Aneurysm Surgery—John L. Fox, M.D.; and G. Robert Nugent, M.D. May 104

Rogers, John S. II, M.D.; Elaine Eyster; Robert W. Hamilton, M.D.; and John H. Dossett, M.D.—Unusual Manifestations of Acute Lymphocytic Leukemia Oct. 281

Roller, Mark F., M.D.; Stanley J. Kandzarl, M.D.; and D. Franklin Milam, M.D.—Non-Obstructive Bladder Dysfunction Jan. 8

Rubio, Carlos, M.D.; Rafael Antonio Ortiz, M.D.; P. H. Garcia Pont, M.D.; Pedtro Lorenzi, M.D.; Donald Vazquez, M.D.; Jorge Melendez, M.D.; and Arturo Acosta, M.D.—Liver Biopsy with the Vim Tru Cut Needle Dec. 345

S

Sarcoma, Congenital, of the Hand (A Case Report)—John P. Evans, M.D.; and Lawrance S. Miller, M.D. Mar. 58

Scholarship in Medicine—Edmund B. Flink, M.D. Aug. 205

Sehgal, Narinder N., M.D.—Pregnancy in Diabetic Women: Review of Five Years' Experience at the Sacramento Medical Center Aug. 81

Sharma, Tara C., M.D.—Diagnosis and Treatment of Benign Lesions in the Upper Urinary Collecting System Nov. 311

Skillman, Thomas G., M.D.—A Current Concept of the Pathophysiology of the Hyperglycemia of Diabetes Mellitus Sept. 247

Sopher, Irvin M., M.D.—The Medical Examiner System: A New Concept in Community Medicine for the State of West Virginia Mar. 49

Student Research Convocation, 1976, West Virginia University School of Medicine Aug. 208

Spontaneous Recanalization of Vas Deferens—Bhasker R. Pujari, M.D.; and Gopal M. Pardasani, M.D. Dec. 348

Syphilitic Aneurysms with Bone Erosion and Rupture—Roland J. Weisser, Jr., M.D.; and Robert J. Marshall, M.D. Jan. 1

T

Treatment of Common Infectious Disorders: Antimocrobial Therapy Series—Jack L. Le Frock, M.D.; et al June 135

Treatment of Hemorrhagic Radiation Cystitis with Formalin—John A. Belis, M.D.; and D. Franklin Milam, M.D. Feb. 31

Tympanometry and the Physician—Robert C. Cody, M.A. July 165

U

Ultrasonic Evaluation of the Abdominal Aorta—Michael T. Hogan, M.D. Feb. 36

Unusual Manifestations of Acute Lymphocytic Leukemia—John S. Rogers II, M.D.; Elaine Eyster; Robert W. Hamilton, M.D.; and John H. Dossett, M.D. Oct. 281

Urinary Collecting System, Upper, Diagnosis and Treatment of Benign Lesions in the—Tara C. Sharma, M.D. Nov. 311

Use and Abuse of Antimicrobial Agents (A Critique): Antimicrobial Therapy Series—Jack L. Le Frock, M.D.; et al June 127

V

Van Liere, Edward J., M.D., Ph.D.—The Health of General Robert E. Lee May 113

Vas Deferens, Spontaneous Recanalization of—Bhasker R. Pujarl, M.D.; and Gopal M. Pardasani, M.D. Dec. 348

Vazquez, Donald, M.D.; Jorge Melendez, M.D.; Arturo Acosta, M.D.; Carlos Rubio, M.D.; Rafael Antonio Ortiz, M.D.; P. H. Garcia Pont, M.D.; and Pedtro Lorenzi, M.D.—Liver Biopsy with the Vim Tru Cut Needle Dec. 345

W

Walker, James H., M.D.; Mitsuru Nakatsuka, M.D.; and Dilip K. Basu, M.D.—Aorta-Coronary Bypass Surgery Apr. 75

Weiss, Raymond B., M.D. (Edited by)—Medical Grand Rounds from the West Virginia University Medical Center:
- Mycosis Fungoldes Jan. 11
- Aplastic Anemia: A Serlous Complication of Viral Hepatitis Mar. 61
- Medical Management of Rheumatoid Arthritis May 107
- Pheochromocytoma July 178
- Small Cell (Oat Cell) Undifferentiated Lung Carcinoma Sept. 254
- Carcinoid Tumors and Carcinoid Syndrome Nov. 321

Welsser, Roland J., Jr., M.D.; and Robert J. Marshall, M.D.—Syphilitic Aneurysms with Bone Erosion and Rupture Jan. 1

West Virginia University School of Medicine, 1976 Student Research Convocation Aug. 208

Z

Zimmermann, Bernard, M.D.; Gabriel E. Al-Hajj, M.D.; and E. Schrae La Plante, M.D.—Colotomy and Polypectomy (A Review) Feb. 28

LIBRIUM®
(chlordiazepoxide HCl)

FOR ALL THE RIGHT REASONS.

- prompt and specific action
- documented benefit-to-risk ratio
- three dosage strengths to meet most therapeutic needs

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Relief of anxiety and tension occurring alone or accompanying various disease states.
Contraindications: Patients with known hypersensitivity to the drug.
Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported. Use of any drug in pregnancy, lactation or in women of childbearing age requires that its potential benefits be weighed against its possible hazards.
Precautions: In the elderly and debilitated, and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (*e.g.*, excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.
Adverse Reactions: Drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally, making periodic blood counts and liver function tests advisable during protracted therapy.
Usual Daily Dosage: Individualize for maximum beneficial effects. *Oral—Adults:* Mild and moderate anxiety and tension, 5 or 10 mg *t.i.d.* or *q.i.d.*; severe states, 20 or 25 mg *t.i.d.* or *q.i.d. Geriatric patients:* 5 mg *b.i.d.* to *q.i.d.* (See Precautions.)
Supplied: Librium® (chlordiazepoxide HCl) *Capsules*, 5 mg, 10 mg and 25 mg—bottles of 100 and 500; Tel-E-Dose® packages of 100, available in trays of 4 reverse-numbered boxes of 25, and in boxes containing 10 strips of 10; Prescription Paks of 50, available singly and in trays of 10. Libritabs® (chlordiazepoxide) *Tablets*, 5 mg, 10 mg and 25 mg—bottles of 100 and 500. With respect to clinical activity, capsules and tablets are indistinguishable.

ROCHE
Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

LIBRIUM®
chlordiazepoxide HCl/Roche
5 mg, 10 mg, 25 mg capsules

Please see following page.

LIBRIUM®
(chlordiazepoxide HCl)

FOR ALL THE RIGHT REASONS.

Yesterday's decision to use Librium for a clinically anxious patient was based on several good reasons. Safety. Effectiveness. Versatility. And the reasons you chose it yesterday are as valid today.

Librium has accumulated an unsurpassed clinical record. A record validated in several thousand papers published both here and abroad.

Librium, when used in proper dosage, rarely interferes with a patient's mental acuity or ability to perform. However, as with all CNS-acting agents, good medical practice suggests that patients be cautioned against hazardous activities requiring complete mental alertness.

Librium has an established safety record and a documented benefit-to-risk ratio. And Librium is used concomitantly with such drugs as cardiac glycosides, diuretics, anticholinergics and antacids.

So when you consider antianxiety therapy, consider Librium. It's a good choice. For today. And tomorrow.

ROCHE

PROVEN ADJUNCT FOR CLINICAL ANXIETY

LIBRIUM® C IV

chlordiazepoxide HCl/Roche

Please see preceding page for summary of product information.

the West Virginia Medical Journal

OFFICIAL ORGAN OF
HE WEST VIRGINIA STATE
MEDICAL ASSOCIATION

Vol. 72 No. 12

Season's Greetings

From Lilly/Dista Research

NALFON®
fenoprofen calcium

300-mg.* Pulvules®

DISTA

Dista Products Company
Division of Eli Lilly and Company
Indianapolis, Indiana 46206

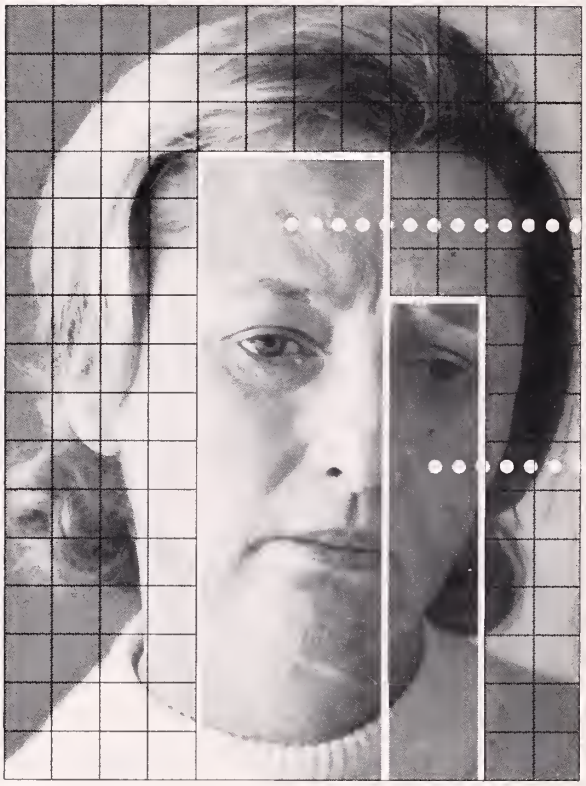
Additional information available to the profession on request.

*Present as 345.9 mg. of the calcium salt of fenoprofen dihydrate equivalent to 300 mg. fenoprofen.

600120

DECEMBER 1976

Both often



Predominant psychoneurotic anxiety

Associated depressive symptoms

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; symptomatic relief of acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology; spasticity caused by upper motor neuron disorders; athetosis; stiff-man syndrome; convulsive disorders (not for sole therapy).

Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms (similar to those with barbiturates and alcohol) have occurred following abrupt discontinuance (convulsions, tremor, abdominal and muscle cramps, vomiting and sweating). Keep addiction-prone individuals under careful

THE ANXIETY-SPECIFIC.

- a predictable pattern of patient response
- seldom associated with serious side effects, in proper dosage
- rarely interferes with mental acuity
- used concomitantly with many primary medications
- three dosage strengths meet most patient needs

LIBRIUM® CIV

chlordiazepoxide HCl/Roche

5mg, 10mg, 25mg capsules

Libritabs® (chlordiazepoxide) available in 5 mg, 10 mg and 25 mg tablets.

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Relief of anxiety and tension occurring alone or accompanying various disease states.

Contraindications: Patients with known hypersensitivity to the drug.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported.

***Usage in Pregnancy:* Use of minor tranquilizers during first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.**

Precautions: In the elderly and debilitated, and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (*e.g.*, excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

Adverse Reactions: Drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally, making periodic blood counts and liver function tests advisable during protracted therapy.

Usual Daily Dosage: Individualize for maximum beneficial effects. *Oral—Adults:* Mild and moderate anxiety and tension, 5 or 10 mg *t.i.d.* or *q.i.d.*; severe states, 20 or 25 mg *t.i.d.* or *q.i.d. Geriatric patients:* 5 mg *b.i.d.* to *q.i.d.* (See Precautions.)

Supplied: Librium® (chlordiazepoxide HCl) *Capsules*, 5 mg, 10 mg and 25 mg—bottles of 100 and 500; Tel-E-Dose® packages of 100, available in trays of 4 reverse-numbered boxes of 25, and in boxes containing 10 strips of 10; Prescription Paks of 50, available singly and in trays of 10. Libritabs® (chlordiazepoxide) *Tablets*, 5 mg, 10 mg and 25 mg—bottles of 100 and 500. With respect to clinical activity, capsules and tablets are indistinguishable.

ROCHE
Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley New Jersey 07110

Please see following page.

THE ANXIETY-SPECIFIC.

Since its discovery in the research laboratories at Roche, Librium has been the object of ongoing pharmacologic and clinical investigation.

The published record on Librium is enormous. So large, in fact, we put it into a computer literature retrieval system to make it more accessible in answering your inquiries.*

It's a record that reveals a consistent pattern of patient response. A highly favorable benefits-to-risk ratio. And minimal interference with many primary medications.

Doing one thing well. Basically, that's what Librium is all about.

LIBRIUM® CIV
chlordiazepoxide HCl/Roche

ROCHE

If you have a question about Librium or any other Roche product, write to Professional Services, Roche Laboratories, Nutley, New Jersey 07110.

Please see preceding page for a summary of product information.

LIBRARY OF THE
COLLEGE OF PHYSICIANS
OF PHILADELPHIA

This Book is due on the last date stamped below. No further preliminary notice will be sent. Requests for renewals must be made on or before the date of expiration.

DUE	DUE

A fine of twenty-five cents will be charged for each week or fraction of a week the book is retained without the Library's authorization.